

US EPA ARCHIVE DOCUMENT

**ATTACHMENT D**

**U.S. EPA REGION 6 MODEL RCRA CEMENT KILN PERMIT**

**(109 Sheets)**

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESOURCE CONSERVATION AND RECOVERY ACT  
HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT FOR A CEMENT KILN**

**IMPORTANT NOTE TO PERMIT WRITERS:** This draft model permit is provided to facilitate the preparation of a RCRA hazardous waste combustion permit for a cement kiln which burns hazardous waste. Not all elements of the draft model permit may be relevant to every facility, nor do the terms and conditions specified in the draft model permit outline the extent of the conditions that may be necessary to ensure protection of human health and the environment. Rather, the terms and conditions provided in the draft model permit represent a suite of conditions which permitting authorities may consider in the context of site specific information, and provides an example of how site specific information can be incorporated into a specific permit.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESOURCE CONSERVATION AND RECOVERY ACT  
HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT FOR A CEMENT KILN**

Permittee \_\_\_\_\_ Facility EPA Identification Number \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Permit Number \_\_\_\_\_

*Note: If the permit is being issued by EPA, a separate permit number is not normally required under RCRA or even desirable because the EPA identification number is specific to the site. The RCRA database known as RCRIS lists all RCRA activities under each EPA identification number. If the permit is being issued by a State, a separate permit number will be assigned.*

**0.A THE PERMIT**

*Note: The Permit Writer should insert a brief description of the cement kiln and other units associated with it, such as (1) the hazardous and nonhazardous waste storage tanks that are used for feeding hazardous and nonhazardous wastes to the cement kiln, (2) the air pollution control device(s) used for controlling air emissions generated from the burning process in the cement kiln, (3) the continuous emissions monitoring system(s) used for monitoring the air emissions being vented through the stack, and (4) the stack. The Permit Writer should also include a description of the various types of hazardous and nonhazardous wastes, gaseous wastes, and secondary fuels burned in the cement kiln—as well as a description of cement kiln dust (CKD) generation, management, and disposition. The Permit Writer should also state whether any hazardous waste storage tank(s) associated with the cement kiln are (1) a less-than-90-day hazardous waste storage tank and, therefore exempt from the requirement of obtaining a RCRA Permit, or (2) included as a permitted unit in the Permit for the cement kiln. Hazardous waste burned for fuel is received from off-site sources. Some facilities receive hazardous waste fuel already blended to burn, and other facilities conduct fuel blending activities on site. The permit writer should be aware of the fact that the waste analysis plan and manifesting requirements are important considerations when writing a permit for a cement kiln burning hazardous waste.*

*The language in this permit is based on the following assumptions:*

- 1. The facility operates as a commercial treatment facility that handles a variety of hazardous waste feed streams.*
- 2. The hazardous waste is generated off-site.*
- 3. The hazardous waste is stored in a series of hazardous waste storage tanks for more than 90 days and, accordingly, requires a RCRA Permit.*
- 4. The secondary fuel for the cement kiln is coal.*

5. *The air pollution control device associated with the cement kiln consists of an electrostatic precipitator (ESP) , and the air emissions are vented through a stack. No bypass stack is present.*
6. *Carbon monoxide and oxygen concentrations in the air emissions being vented through the stack are continuously monitored by a continuous emissions monitoring system.*
7. *The facility generates cement kiln dust that is disposed in an on-site landfill.*

*Additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 USC 6901 et seq., commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified, and to be codified, in Title 40 of the Code of Federal Regulations [40 CFR]), a Hazardous Waste Management Facility Permit (hereinafter referred to as Permit) is issued to [Insert name of the Permittee] \_\_\_\_\_ (hereinafter referred to as Permittee), to operate a cement kiln for the burning of hazardous waste, and other units associated with the cement kiln, at its facility located in [Insert name of city and state] \_\_\_\_\_, on [Insert street address] \_\_\_\_\_, at latitude \_\_\_\_\_ and longitude \_\_\_\_\_, which is described as follows:

#### **0.B DUTY TO COMPLY**

*Note: Modifications to the cement kiln, including air pollution control equipment, necessary to comply with the hazardous waste combustion maximum achievable control technology (MACT) standards (40 CFR Part 63, Subpart EEE), may require a permit modification pursuant to 40 CFR Part 270.42. The Permit Writer may include the following statement as an optional condition in this Permit: "Compliance with the MACT standards will be required on the schedule provided in the final MACT rule, and this Permit cannot be used as a shield to delay compliance with these standards. Permit modification applications to address any process or equipment changes needed to comply with the new emissions standards must be filed within the time frames specified in the applicable regulations. Failure to submit a timely and complete permit modification request, or a letter justifying why no modifications are needed, shall result in termination of this permit to manage hazardous wastes."*

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained or cited herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 124, 260 through 266, and 270. Applicable regulations are those that are in effect on the date of issuance of the Permit, in accordance with 40 CFR Part 270.32(c).

#### **0.C BASIS FOR PERMIT**

*Note: The language in this Permit is based on the assumption that the facility has not previously been operating under interim status and is now being required to submit a RCRA Part B permit application and obtain a RCRA Permit. The Permit writer should be aware that the permitting approach and the permit terms and conditions will be different for other scenarios, such as (1) a facility with no other RCRA-regulated units that has an existing cement kiln that becomes subject to RCRA regulations for the first time, (2) a facility with interim status RCRA units that has an existing cement kiln that becomes subject to RCRA regulations for the first time, (3) a facility with permitted RCRA unit(s) that has an existing cement kiln that becomes subject to RCRA regulations for the first time, (4) a facility that has permitted and interim status RCRA units on site, and an existing cement kiln that becomes subject to RCRA regulations for the first time, or (5) a facility with permitted RCRA units that constructs a new cement kiln also subject to permitting.*

*For facilities subject to one of these alternate scenarios, the Permit Writer may only need to include those modules of the permit that are new or revised. However, the Permit Writer may also choose to revise the entire permit. Additional language may also be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

*In addition to the permit, relevant sections of the Part B permit application must be attached to the Permit in order to facilitate compliance.*

This Permit is based on the assumptions that (1) the information submitted in the RCRA Part B Permit Application attached to the Permittee's letter, dated \_\_\_\_\_, as modified by subsequent amendments [*Insert as applicable*] dated \_\_\_\_\_ and \_\_\_\_\_, (hereby incorporated by reference and hereafter referred to as the Application) is accurate, and (2) the facility will be constructed and operated as specified in the Application.

Any inaccuracies in the submitted information may be cited as grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with 40 CFR Parts 270.41, 270.42, and 270.43; and for enforcement action. Additionally, a new trial burn may be required and additional permit conditions may be added, if any significant assumptions in the site-specific risk assessment dated [*Insert date*] \_\_\_\_\_, are proven to be incorrect during the term of this permit. The Permittee must inform EPA of any deviation from, or changes in, the information in the Application that might affect the Permittee's ability to comply with the applicable regulations or conditions of this Permit.

#### 0.D EFFECTIVE DATES

This Permit is effective as of \_\_\_\_\_, 19 \_\_, and shall remain in effect until [*Insert the effective date*] \_\_\_\_\_, 20 \_\_, unless revoked and reissued under 40 CFR Part 270.41, terminated under 40 CFR Part 270.43, or continued in accordance with 40 CFR Part 270.51(a).

\_\_\_\_\_

\_\_\_\_\_ [*Signature*] \_\_\_\_\_

[Date]

[Insert name and title of person  
authorized to issue the Permit]

## CONTENTS

<b>0.A</b>	<b>THE PERMIT</b>	
<b>0.B</b>	<b>DUTY TO COMPLY</b>	
<b>0.C</b>	<b>BASIS FOR PERMIT</b>	
<b>0.D</b>	<b>EFFECTIVE DATES</b>	
<b>I</b>	<b>STANDARD PERMIT CONDITIONS</b>	<b>I-1</b>
<b>I.A</b>	<b>EFFECT OF PERMIT</b>	<b>I-1</b>
<b>I.B</b>	<b>PERMIT ACTIONS</b>	<b>I-1</b>
	<b>I.B.1 Permit Review, Modification, Revocation and Reissuance, and Termination</b>	<b>I-1</b>
	<b>I.B.2 Permit Renewal</b>	<b>I-2</b>
<b>I.C</b>	<b>SEVERABILITY</b>	<b>I-3</b>
<b>I.D</b>	<b>DEFINITIONS</b>	<b>I-3</b>
<b>I.E</b>	<b>DUTIES AND REQUIREMENTS</b>	<b>I-6</b>
	<b>I.E.1 Duty to Comply</b>	<b>I-6</b>
	<b>I.E.2 Duty to Reapply</b>	<b>I-6</b>
	<b>I.E.3 Permit Expiration</b>	<b>I-6</b>
	<b>I.E.4 Obligation for Corrective Action</b>	<b>I-6</b>
	<b>I.E.5 Need to Halt or Reduce Activity Not a Defense</b>	<b>I-6</b>
	<b>I.E.6 Duty to Mitigate</b>	<b>I-7</b>
	<b>I.E.7 Proper Operation and Maintenance</b>	<b>I-7</b>
	<b>I.E.8 Duty to Provide Information</b>	<b>I-7</b>
	<b>I.E.9 Inspection and Entry</b>	<b>I-7</b>
	<b>I.E.10 Monitoring and Records</b>	<b>I-8</b>
	<b>I.E.11 Reporting Planned Changes</b>	<b>I-9</b>
	<b>I.E.12 Reporting Anticipated Noncompliance</b>	<b>I-9</b>
	<b>I.E.13 Certification of Construction or Modification</b>	<b>I-10</b>
	<b>I.E.14 Transfer of Permits</b>	<b>I-10</b>
	<b>I.E.15 Twenty-Four Hour Reporting</b>	<b>I-11</b>
	<b>I.E.16 Other Noncompliance</b>	<b>I-12</b>
	<b>I.E.17 Other Information</b>	<b>I-12</b>
<b>I.F</b>	<b>SIGNATORY REQUIREMENT</b>	<b>I-13</b>
<b>I.G</b>	<b>REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE REGIONAL ADMINISTRATOR</b>	<b>I-13</b>
<b>I.H</b>	<b>CONFIDENTIAL INFORMATION</b>	<b>I-13</b>
<b>I.I</b>	<b>DOCUMENTS TO BE MAINTAINED AT THE FACILITY</b>	<b>I-13</b>
	<b>I.I.1 Waste Analysis Plan</b>	<b>I-13</b>
	<b>I.I.2 Inspection Schedules and Logs</b>	<b>I-13</b>
	<b>I.I.3 Personnel Training Documents and Records</b>	<b>I-14</b>



I.I.4	Contingency Plan .....	I-14
I.I.5	Operating Record .....	I-14
I.I.6	Closure and Post-Closure Plan .....	I-14
I.I.7	Closure and Post-Closure Cost Estimate .....	I-14
I.I.8	Independent Tank System Assessment .....	I-14
I.I.9	Copy of Permit .....	I-14
I.I.10	Other Documents .....	I-14
I.J	ATTACHMENTS AND DOCUMENTS INCORPORATED BY REFERENCE	I-15
I.J.1	Precedence of Permit over Attachments .....	I-15
I.J.2	Precedence of Permit over Application .....	I-15
I.J.3	Precedence of Attachment over Application .....	I-15
I.K	COORDINATION WITH THE CLEAN AIR ACT .....	I-15
II	GENERAL FACILITY CONDITIONS .....	II-1
II.A	DESIGN AND OPERATION OF FACILITY .....	II-1
II.B	RECEIPT OF HAZARDOUS WASTE FROM FOREIGN SOURCE .....	II-1
II.C	RECEIPT OF OFF-SITE HAZARDOUS WASTE .....	II-1
II.D	SPECIFIC WASTE BAN .....	II-1
II.D.1	Storage of Restricted Waste .....	II-1
II.D.2	Compliance with 40 CFR Part 268.7 .....	II-2
II.D.3	Waste Analysis of Restricted Waste .....	II-2
II.D.4	Land Disposal Restriction .....	II-2
II.E	GENERAL WASTE ANALYSIS .....	II-2
II.F	SECURITY PROCEDURES .....	II-2
II.G	GENERAL INSPECTION REQUIREMENTS .....	II-2
II.G.1	Inspection Schedule .....	II-2
II.G.2	Inspection Remedies .....	II-3
II.G.3	Inspection Records .....	II-3
II.H	PERSONNEL TRAINING .....	II-3
II.H.1	Training Requirements .....	II-3
II.H.2	Training Schedule .....	II-3
II.H.3	Training Records .....	II-3
II.I	GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES .....	II-3
II.J	LOCATION STANDARDS .....	II-4
II.K	PREPAREDNESS AND PREVENTION .....	II-4

II.K.1	Required Equipment .....	II-4
II.K.2	Testing and Maintenance of Equipment .....	II-4
II.K.3	Arrangements with Local Authorities .....	II-4
II.L	CONTINGENCY PLAN .....	II-5
II.L.1	Implementation of Contingency Plan .....	II-5
II.L.2	Copies of Contingency Plan .....	II-5
II.L.3	Amendments to Contingency Plan .....	II-5
II.M	RECORD KEEPING AND REPORTING .....	II-5
II.M.1	Operating Record .....	II-5
II.M.2	Manifest Records .....	II-5
II.M.3	Waste Minimization .....	II-5
II.M.4	Biennial Report .....	II-6
II.M.5	Other Reports .....	II-7
II.N	GENERAL CLOSURE REQUIREMENTS .....	II-7
II.N.1	Performance Standard .....	II-7
II.N.2	Amendment to Closure and Post-Closure Plan .....	II-7
II.N.3	Notification of Closure .....	II-7
II.N.4	Time Allowed for Closure .....	II-7
II.N.5	Disposal or Decontamination of Equipment, Structures, and Soils ...	II-7
II.N.6	Certification of Closure .....	II-7
II.N.7	Post-Closure Care and Use of Property .....	II-8
II.N.8	Notification of Post-Closure .....	II-8
II.N.9	Certification of Completion of Post-Closure .....	II-8
II.O	COST ESTIMATE FOR FACILITY CLOSURE AND POST-CLOSURE ...	II-8
II.O.1	Adjustment for Inflation .....	II-8
II.O.2	Revision due to Changes in Closure and Post-Closure Plan .....	II-8
II.O.3	Copy at Facility .....	II-9
II.P	FINANCIAL ASSURANCE FOR FACILITY CLOSURE AND POST-CLOSURE .....	II-9
II.Q	LIABILITY REQUIREMENTS .....	II-9
II.R	INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS .....	II-9
III	STORAGE IN CONTAINERS .....	III-1
III.A	UNIT DESCRIPTION—CONTAINER STORAGE UNITS .....	III-1
III.B	PERMITTED AND PROHIBITED WASTE IDENTIFICATION .....	III-1

III.B.1	Permitted Waste Storage .....	III-1
III.B.2	Prohibited Waste Storage .....	III-1
III.C	CONDITION OF CONTAINERS .....	III-1
III.D	COMPATIBILITY OF WASTE WITH CONTAINERS .....	III-2
III.E	MANAGEMENT OF CONTAINERS .....	III-2
III.F	CONTAINMENT SYSTEMS .....	III-2
III.G	INSPECTION SCHEDULES AND PROCEDURES .....	III-2
III.H	RECORD KEEPING .....	III-2
III.I	CLOSURE .....	III-2
III.J	SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE .....	III-2
III.J.1	Duty to Comply with 40 CFR Part 264.176 .....	III-2
III.J.2	Duty to Comply with 40 CFR Part 264.17(a) .....	III-2
III.K	SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE ..	III-3
III.K.1	Duty to Comply with 40 CFR Part 264.177(a) .....	III-3
III.K.2	Duty to Comply with 40 CFR Part 264.177(b) .....	III-3
III.K.3	Duty to Comply with 40 CFR Part 264.177(c) .....	III-3
III.L	PROVISIONS FOR MANAGEMENT OF HAZARDOUS WASTE RECEIVED FROM OFF-SITE .....	III-3
III.M	AIR EMISSION STANDARDS .....	III-3
III.N	COMPLIANCE SCHEDULE .....	III-3
IV	STORAGE IN TANKS .....	IV-1
IV.A	DESCRIPTION OF TANK SYSTEMS .....	IV-1
IV.B	PERMITTED AND PROHIBITED WASTE .....	IV-1
IV.B.1	Permitted Waste .....	IV-1
IV.B.2	Prohibited Waste .....	IV-1
IV.C	SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS .....	IV-2
IV.C.1	Requirements for Facilities with No Secondary Containment .....	IV-2
IV.C.2	Requirements for Facilities Requesting a Variance .....	IV-2
IV.C.3	Duty to Comply with 40 CFR Parts 264.193(b) through (f) .....	IV-2
IV.C.4	Duty to Comply with 40 CFR Part 264.193 .....	IV-2
IV.D	OPERATING REQUIREMENTS .....	IV-3
IV.D.1	Duty to Comply with 40 CFR Part 264.194(a) .....	IV-3
IV.D.2	Duty to Comply with 40 CFR Part 264.194(b) .....	IV-3

IV.E	RESPONSE TO LEAKS OR SPILLS .....	IV-3
IV.E.1	Duty to Comply with 40 CFR Part 264.196(a) through (e) .....	IV-3
IV.E.2	Duty to Comply with 40 CFR Part 264.196(f) .....	IV-3
IV.F	INSPECTION SCHEDULES AND PROCEDURES .....	IV-3
IV.F.1	Duty to Comply with 40 CFR Part 264.195(a) through (c) .....	IV-3
IV.F.2	Duty to Comply with 40 CFR Part 264.195(d) .....	IV-3
IV.G	CLOSURE AND POST-CLOSURE CARE .....	IV-3
IV.G.1	Duty to Comply with 40 CFR Part 264.197(a) .....	IV-3
IV.G.2	Duty to Comply with 40 CFR Part 264.197(b) and (c) .....	IV-3
IV.H	SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES .....	IV-4
IV.H.1	Duty to Comply with 40 CFR Part 264.198(a) .....	IV-4
IV.H.2	Duty to Comply with 40 CFR Part 264.198(b) .....	IV-4
IV.I	SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTE .....	IV-4
IV.J	AIR EMISSION STANDARDS .....	IV-4
IV.K	COMPLIANCE SCHEDULE .....	IV-4
V	MISCELLANEOUS UNITS .....	V-1
V.A	DESIGN AND CONSTRUCTION REQUIREMENTS .....	V-1
V.B	PERMITTED AND PROHIBITED WASTE IDENTIFICATION .....	V-2
V.C	OPERATION AND MAINTENANCE REQUIREMENTS .....	V-2
V.D	OPERATING CONDITIONS .....	V-2
V.E	WASTE FEED LIMITATIONS .....	V-2
V.F	WASTE FEED CUTOFF REQUIREMENTS .....	V-3
V.G	PERFORMANCE STANDARDS .....	V-3
V.H	PERFORMANCE TEST .....	V-3
V.I	MONITORING AND INSPECTION REQUIREMENTS .....	V-4
V.J	RECORD KEEPING AND REPORTING REQUIREMENTS .....	V-4
V.K	AIR QUALITY PROVISIONS .....	V-4
VI	GENERAL OPERATING REQUIREMENTS .....	VI-1
VIA	CONSTRUCTION .....	VI-1
VIA.1	Compliance with Engineering Design Plans and Specifications .....	VI-1
VIA.2	Modifications .....	VI-1
VIA.3	Calibration and Testing .....	VI-1
VIA.4	Certification and Inspection .....	VI-1

<b>VI.B</b>	<b>INSPECTION</b>	<b>VI-2</b>
	<b>VI.B.1 Requirements</b>	<b>VI-2</b>
	<b>VI.B.2 Records</b>	<b>VI-2</b>
<b>VI.C</b>	<b>MAINTENANCE</b>	<b>VI-3</b>
	<b>VI.C.1 Requirements</b>	<b>VI-3</b>
	<b>VI.C.2 Records</b>	<b>VI-4</b>
<b>VI.D</b>	<b>MONITORING</b>	<b>VI-4</b>
	<b>VI.D.1 Requirements</b>	<b>VI-4</b>
	<b>VI.D.2 Records</b>	<b>VI-6</b>
<b>VI.E</b>	<b>CALIBRATION</b>	<b>VI-7</b>
	<b>VI.E.1 Requirements</b>	<b>VI-7</b>
	<b>VI.E.2 Records</b>	<b>VI-7</b>
<b>VI.F</b>	<b>PERFORMANCE STANDARDS</b>	<b>VI-7</b>
	<b>VI.F.1 Requirements</b>	<b>VI-7</b>
	<b>VI.F.2 Records</b>	<b>VI-9</b>
<b>VI.G</b>	<b>AUTOMATIC WASTE FEED CUTOFF</b>	<b>VI-10</b>
	<b>VI.G.1 Requirements</b>	<b>VI-10</b>
	<b>VI.G.2 Records</b>	<b>VI-10</b>
<b>VI.H</b>	<b>REPORTS</b>	<b>VI-11</b>
	<b>VI.H.1 Quarterly Reports</b>	<b>VI-11</b>
	<b>VI.H.2 Trial Burn Failure</b>	<b>VI-11</b>
<b>VI.I</b>	<b>DIRECT TRANSFER OF HAZARDOUS WASTE</b>	<b>VI-12</b>
<b>VI.J</b>	<b>REGULATION OF RESIDUES</b>	<b>VI-12</b>
<b>VII</b>	<b>SPECIFIC OPERATING CONDITIONS</b>	<b>VII-1</b>
	<b>VII.A SHAKEDOWN</b>	<b>VII-1</b>
	<b>VII.A.1 Permitted and Prohibited Wastes</b>	<b>VII-1</b>
	<b>VII.A.2 Process Operating Conditions</b>	<b>VII-4</b>
	<b>VII.A.2.a Group A Parameter Limits</b>	<b>VII-4</b>
	<b>VII.A.2.b Group B Parameter Limits</b>	<b>VII-5</b>

VII.A.2.c	Group C Parameter Limits .....	VII-8
VII.A.3	Duration of Shakedown .....	VII-8
VII.A.4	Reports .....	VII-9
VII.B	TRIAL BURN .....	VII-9
VII.B.1	Trial Burn Plan Submittal .....	VII-9
VII.B.2	Conformity to the Trial Burn Plan .....	VII-9
VII.B.3	Trial Burn POHCs .....	VII-9
VII.B.4	Trial Burn Determinations .....	VII-9
VII.B.5	Submittals and Certifications of Trial Burn Data .....	VII-10
VII.B.6	Risk Assessment Requirements .....	VII-10
VII.C	POST-TRIAL BURN .....	VII-10
VII.C.1	Permitted and Prohibited Wastes .....	VII-10
VII.C.2	Process Operating Conditions .....	VII-12
VII.C.2.a	Group A Parameter Limits .....	VII-12
VII.C.2.b	Group B Parameter Limits .....	VII-13
VII.C.2.c	Group C Parameter Limits .....	VII-16
VII.C.3	Reports .....	VII-16
VII.D	FINAL OPERATING CONDITIONS .....	VII-17
VII.D.1	Permitted and Prohibited Wastes .....	VII-17
VII.D.2	Process Operating Conditions .....	VII-19
VII.D.2.a	Group A Parameter Limits .....	VII-19
VII.D.2.b	Group B Parameter Limits .....	VII-21
VII.D.2.c	Group C Parameter Limits .....	VII-25
VII.D.3	Risk Related Conditions .....	VII-25
VII.D.3.a	Land Use Changes .....	VII-25
VII.D.3.b	Environmental Monitoring .....	VII-26
VII.D.3.c	Equipment Additions and Improvements .....	VII-26
VII.D.4	Reports .....	VII-27
VIII	CORRECTIVE ACTION .....	VIII-1
VIII.A	AUTHORITY .....	VIII-1
VIII.B	IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS .....	VIII-1

VIII.C	NOTIFICATION REQUIREMENTS FOR, AND ASSESSMENT OF, NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS .....	VIII-2
VIII.D	NOTIFICATION REQUIREMENTS FOR NEWLY IDENTIFIED RELEASES FROM SOLID WASTE MANAGEMENT UNITS .....	VIII-2
VIII.E	STABILIZATION OR EMERGENCY REMOVAL .....	VIII-2
VIII.F	RCRA FACILITY INVESTIGATION WORK PLAN .....	VIII-3
VIII.G	RCRA FACILITY INVESTIGATION .....	VIII-3
VIII.H	CORRECTIVE MEASURES STUDY WORK PLAN .....	VIII-3
VIII.I	CORRECTIVE MEASURES STUDY .....	VIII-3
VIII.J	SELECTION OF REMEDY .....	VIII-4
VIII.K	FINANCIAL ASSURANCE FOR CORRECTIVE ACTION .....	VIII-4
VIII.L	REPORTING .....	VIII-4
IX	CLOSURE AND FINANCIAL ASSURANCE .....	IX-1
IX.A	GENERAL CLOSURE REQUIREMENTS .....	IX-1
IX.B	GENERAL POST-CLOSURE REQUIREMENTS .....	IX-1
IX.C	COST ESTIMATE FOR FACILITY CLOSURE (AND POST-CLOSURE) .	IX-2
IX.D	FINANCIAL ASSURANCE FOR FACILITY CLOSURE (AND POST-CLOSURE) .....	IX-2
IX.E	LIABILITY REQUIREMENTS .....	IX-2
IX.F	INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS .....	IX-3

## ATTACHMENTS

ATTACHMENT

DATE [     ]

*Note: The following additional attachments may be included as part of this Permit. Refer the each Module of the Permit for a description of these attachments.*

[   ]	<i>LIST OF PERMITTED HAZARDOUS WASTE CODES</i>	[   ]
[   ]	<i>FACILITY INSPECTION SCHEDULE</i>	[   ]
[   ]	<i>CLOSURE PLAN</i>	[   ]
[   ]	<i>FACILITY POST-CLOSURE PLAN</i>	[   ]
[   ]	<i>SECONDARY CONTAINMENT PLANS AND SPECIFICATIONS</i>	[   ]
[   ]	<i>IGNITABLE OR REACTIVE WASTE PROCEDURES</i>	[   ]
[   ]	<i>INCOMPATIBLE WASTE PROCEDURES</i>	[   ]
[   ]	<i>PLANS AND REPORTS TO SUPPORT A VARIANCE FROM SECONDARY CONTAINMENT REQUIREMENTS</i>	[   ]
[   ]	<i>DETAILED PLANS AND OTHER INFORMATION DESCRIBING SECONDARY CONTAINMENT SYSTEMS</i>	[   ]
[   ]	<i>PROCEDURES FOR CONDUCTING LEAK TESTS</i>	[   ]
[   ]	<i>PROCEDURES FOR PREVENTING SPILLS AND OVERFLOWS FROM THE TANKS OR CONTAINMENT SYSTEMS</i>	[   ]
[   ]	<i>PROCEDURES FOR HANDLING IGNITABLE OR REACTIVE WASTE</i>	[   ]
[   ]	<i>PROCEDURES FOR HANDLING INCOMPATIBLE WASTES</i>	[   ]
VI-A	<b>INSTRUMENTATION CONSTRUCTION SPECIFICATIONS AND INSTALLATION CHECK-OUT PROCEDURES</b>	[   ]
VI-B	<b>INSPECTIONS</b>	[   ]
VI-C	<b>PREVENTATIVE MAINTENANCE AND CALIBRATION</b>	[   ]
VI-D	<b>PROCESS CONTINUOUS MONITORS AND WASTE FEED CUT-OFF PARAMETERS</b>	[   ]
VIII-B	<b>LIST OF SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN IDENTIFIED IN THE RCRA FACILITY ASSESSMENT(S)</b>	[   ]
VIII-C	<b>FACILITY REPORTING AND SUBMITTAL SUMMARY</b>	[   ]



## MODULE I—STANDARD PERMIT CONDITIONS

*Note: This permit module contains the general conditions required by 40 Code of Federal Regulations (40 CFR) Part 270 for all Hazardous Waste Management Facility Permits. This permit module must be included in all Hazardous Waste Management Facility Permits for facilities with cement kilns that treat hazardous waste.*

### I.A EFFECT OF PERMIT

The Permittee is allowed to store hazardous waste in a [Insert capacity of the hazardous waste storage tank, expressed in gallons] \_\_\_\_\_ gallon capacity [Specify aboveground or underground] \_\_\_\_\_ storage tank [Insert tank identification] \_\_\_\_\_, and to treat hazardous waste in a cement kiln [Insert identification number of the cement kiln] \_\_\_\_\_, by burning hazardous waste as a fuel, in accordance with the conditions of this Permit. Subject to 40 CFR Part 270.4, compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA, except those requirements—not included in the Permit—that are or become effective by statute (or are promulgated), under Subparts AA, BB, and CC of 40 CFR Part 265 (which limit air emissions). Specifically, compliance with this permit during its term constitutes compliance, for the purposes of enforcement, with 40 CFR Parts 264 and 266 only for those management practices specifically authorized by this Permit. The Permittee is also required to comply with Parts 260, 261, 262, and 263, as applicable.

The issuance of this Permit does not (1) convey any property rights or any exclusive privilege; (2) authorize any injury to persons or property, or invasion of other private rights, or (3) authorize any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued, or any action brought under Sections 3008(a), 3008(h), 3013, or 7003; (1) RCRA Sections 106(a), 104 or 107, (2) Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601 *et seq.* (commonly known as CERCLA); or (3) any other law providing for protection of public health or the environment for any imminent and substantial endangerment to human health, welfare, or the environment (40 CFR Parts 270.4 and 270.30[g]).

### I.B PERMIT ACTIONS

#### I.B.1 Permit Review, Modification, Revocation and Reissuance, and Termination

This Permit may be reviewed, modified, revoked and reissued, or terminated for cause, as specified in 40 CFR Parts 270.41, 270.42, and 270.43. The requirements of 40 CFR Part 270.30(f) shall not be stayed by the filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance on the part of the Permittee. If at any time for any of the reasons specified in 40 CFR Part 270.41, the Regional Administrator determines that modification of this Permit is necessary, the Regional Administrator may (1) initiate a modification according to 40 CFR Part 124.5 as outlined by Condition I.B.1.a of this

Permit or (2) require the Permittee to request a permit modification as outlined by Condition I.B.1.b of this Permit.

**I.B.1.a**            **The Regional Administrator may initiate a modification according to 40 CFR Part 124.5, as follows.**

**I.B.1.a.1**            **Notify the Permittee in writing of the proposed modification and the date by which comments on the proposed modification must be received.**

**I.B.1.a.2**            **Publish a notice of the proposed modification in a locally distributed newspaper, broadcast the notice over a local radio station, mail a notice to all persons on the facility mailing list maintained according to 40 CFR Part 124.10(c)(1)(ix), and place a notice in the facility's information repository (a central source of all pertinent documents concerning the remedial action, usually maintained at the facility or some other public place in the vicinity of the permitted facility, such as a public library).**

**I.B.1.a.3**            **If the Regional Administrator receives no written comment on the proposed modification, the modification will become effective five (5) calendar days after the close of the comment period. The Regional Administrator will:**

- **Notify the Permittee in writing of the final decision**
- **Notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the modified permit in the information repository, if a repository is required for the facility**

**I.B.1.a.4**            **If the Regional Administrator receives written comment on the proposed modification, the Regional Administrator will make a final determination concerning the modification after the end of the comment period. The Regional Administrator will:**

- **Notify the Permittee in writing of the final decision**
- **Provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified permit in the information repository, if a repository is required for the facility**

**I.B.1.b**            **The Permittee may initiate permit modifications proceeding under 40 CFR Part 270.42. All applicable requirements and procedures as specified in 40 CFR Part 270.42 shall be followed.**

**I.B.1.c Modifications of the Permit do not constitute a reissuance of the Permit.**

**I.B.2 Permit Renewal**

This Permit may be renewed as specified in 40 CFR Part 270.30(b) and Condition I.E.2 of this Permit. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, and changes in applicable regulations (40 CFR Part 270.30[b] and HSWA Section 212).

**I.C SEVERABILITY**

The provisions of this Permit are severable; if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected. Invalidation of any statutory or regulatory provision on which any condition of this Permit is based does not affect the validity of any other statutory or regulatory basis for that condition (40 CFR Part 124.16[a]).

**I.D DEFINITIONS**

*Note: The Permit Writer should insert additional definitions, as necessary, as part of this Condition.*

For purposes of this Permit, terms used herein shall have the same meaning as in 40 CFR Parts 124, 260 through 266, and 270, unless this Permit specifically provides otherwise. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

“ADPC&E” means the Arkansas Department of Pollution Control and Ecology.

“Annual Average” is the arithmetic mean of all one-minute averages recorded during *[Insert either (1) each calendar year while hazardous wastes were burned or (2) the year beginning and ending on the annual anniversary of the date of this Permit]*.

“Application” refers to the RCRA Part B Permit Application and subsequent amendments submitted by the Permittee for obtaining a Permit.

“Area of Concern” (AOC) means any discernable unit or area which, in the opinion of the Regional Administrator, may have received solid or hazardous waste or waste containing hazardous constituents at any time. The Regional Administrator may require investigation of the unit as if it were a SWMU. If shown to be a SWMU by the investigation, the AOC must be reported by the Permittee as a newly-identified SWMU. If the AOC is shown not to be a SWMU by the investigation, the Regional Administrator may determine that no further action is necessary and notify the Permittee in writing.

**“CMS” means Corrective Measures Study.**

**“Continuous monitor” is a monitor that continuously samples the regulated parameter without interruption, evaluates the detector response at least once each 15 seconds, and computes and records the average value at least once every 60 seconds.**

**“EPA” means the United States Environmental Protection Agency.**

**“ESP” means Electrostatic Precipitator.**

**“Facility” means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA.**

**“Foreign Source” means any facility or entity located outside the United States which imports hazardous waste into the United States for transportation, storage, or treatment.**

**“Group A Parameters” are operating conditions that are continuously monitored and interlocked with the automatic waste feed cutoff system.**

**“Group B Parameters” are operating conditions that are neither continuously monitored nor interlocked with the automatic waste feed cutoff system.**

**“Group C Parameters” are operating conditions based strictly on design and equipment manufacturers’ recommendations and not on trial burn results.**

**“HSWA” means the 1984 Hazardous and Solid Waste Amendments to RCRA.**

**“Hazardous constituent” means any constituent identified in Appendix VIII of 40 CFR Part 261, or any constituent identified in Appendix IX of 40 CFR Part 264.**

**“Hazardous waste” means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The term hazardous waste includes hazardous constituent.**

**“Hourly rolling average” is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.**

**“LDEQ” means the Louisiana Department of Environmental Quality.**

**“NMED” means the New Mexico Environment Department.**

“One-Minute Average” is the arithmetic mean of all valid continuous measurements made in each 60 second period.

“ODEQ” means the Oklahoma Department of Environmental Quality.

“Operating record” means written or electronic records of all maintenance, monitoring, inspection, calibration, or performance testing—or other data as may be required—to demonstrate compliance with this Permit, document noncompliance with this Permit, or document actions taken to remedy noncompliance with this permit. A minimum list of documents that must be included in the operating record are identified at 40 CFR Part 264.73(b).

“Permit” means the conditions embodied in these special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA. Specifically, “Permit” refers to the RCRA Permit for the cement kiln and other units associated with the cement kiln at *[Insert name of the city and state]* \_\_\_\_\_ facility of *[Insert name of the Permittee]* \_\_\_\_\_.

“Permittee” refers to *[Insert name of the company to which Permit is issued]* \_\_\_\_\_.

“Regional Administrator” refers to the Regional Administrator of EPA Region *[Insert EPA Region Number]* \_\_, or their designee or authorized representative. This may mean the Director or other representative of the appropriate State agency, in the case of HSWA provisions for which a State is authorized.

“RCRA” means the Resource Conservation and Recovery Act of 1980 as amended by HSWA in 1984.

“RCRA Permit” means the full permit, with RCRA and HSWA portions.

“RFA” means RCRA Facility Assessment.

“RFI” means RCRA Facility Investigation.

“Release” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

“Solid Waste Management Unit” (SWMU) means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

If, subsequent to the issuance of this permit, regulations are promulgated which redefine any of the above terms, the Regional Administrator may, at its discretion, apply the new definition to this permit.

## **I.E DUTIES AND REQUIREMENTS**

### **1.E.1 Duty to Comply**

The Permittee must comply with all conditions of this Permit, except that the Permittee is not required to comply with the conditions of this Permit to the extent and for the duration for which such noncompliance is authorized in an emergency permit. Any Permit noncompliance, except under the terms of an emergency permit, constitutes a violation of RCRA and will be cited as grounds for enforcement action; Permit termination, revocation and reissuance, or modification; or denial of a Permit renewal application (40 CFR Part 270.30[a]).

### **1.E.2 Duty to Reapply**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must apply for and obtain a new Permit. The Permittee shall submit a complete application for a new Permit at least 180 days before the Permit expires, unless permission for a later date has been granted by the Regional Administrator. The Regional Administrator will not grant permission to submit the complete application for a new Permit later than the expiration date of this Permit (40 CFR Parts 270.10[h], and 270.30[b]).

### **1.E.3 Permit Expiration**

*Note: The Regional Administrator can issue the Permit for a duration of less than 10 years.*

This Permit and all conditions herein shall be effective for 10 years from the effective date of this Permit. This Permit and all conditions therein shall remain in effect beyond the Permit's expiration date if the Permittee has submitted a timely, complete application (40 CFR Parts 270.10 and 270.13 through 270.29), and, through no fault of the Permittee, the Regional Administrator has not made a final determination regarding reissuance of the Permit (40 CFR Parts 270.50[a], and 270.51[a]).

### **1.E.4 Obligation for Corrective Action**

The Permittee must have all necessary permits during the active life (including the closure period) of the cement kiln and other units associated with the cement kiln, and for any period necessary to comply with the corrective action requirements in Module VIII of this Permit. The corrective action obligations required by this Permit shall continue regardless of whether the Permittee continues to operate or ceases operation and closes the facility. The Permittee is obligated to complete facility-wide corrective action regardless of the operational status of the facility.



**I.E.5 Need to Halt or Reduce Activity Not a Defense**

In an enforcement action, the Permittee is not entitled to a defense that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit (40 CFR Part 270.30[c]).

**I.E.6 Duty to Mitigate**

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment resulting from the noncompliance, and shall implement all measures that are reasonable, to prevent significant adverse impacts on human health or the environment (40 CFR Part 270.30[d]).

**I.E.7 Proper Operation and Maintenance**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that the Permittee installs or uses to achieve compliance with the conditions of this Permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit (40 CFR Part 270.30[e]).

**I.E.8 Duty to Provide Information**

The Permittee shall provide the Regional Administrator, within a reasonable time, with any relevant information that the Regional Administrator requests to determine whether there is cause for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also provide the Regional Administrator, upon request, with copies of any records required by this Permit (40 CFR Part 270.30[h]).

**I.E.9 Inspection and Entry**

Upon the presentation of credentials and other documents required by law, the Permittee shall allow the Regional Administrator or an authorized representative to do the following (40 CFR Part 270.30[i]):

**I.E.9.a** Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit.

**I.E.9.a.1** Have access to, and copy, at reasonable times, any records that must be kept under the conditions of this Permit.

- I.E.9.a.2      Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit.
- I.E.9.a.3      Sample or monitor, at reasonable times—for the purposes of assuring Permit compliance or as otherwise authorized by RCRA—any substances or parameters at any location.

#### **I.E.10 Monitoring and Records**

- I.E.10.a      *Note: Relevant sections of the Part B permit application may be attached to the Permit in order to facilitate compliance.*

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The methods used to obtain a representative sample of the waste to be analyzed must be the appropriate methods from Appendix I of 40 CFR Part 261, or the methods specified in the Waste Analysis Plan included as Attachment [Insert Attachment letter] \_\_ of this Permit, or an equivalent method approved by the Regional Administrator. Laboratory methods must be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, latest edition), *Methods for Chemical Analysis of Water and Wastes* (EPA 600/4-79-020), or an equivalent method, as specified in the attached (or referenced) Waste Analysis Plan (40 CFR Part 270.30[j][1]).

- I.E.10.b      The Permittee shall retain, at the facility, records of all monitoring information, including the following:

- I.E.10.b.1      Calibration and maintenance records
- I.E.10.b.2      Original recordings (strip chart or other) for continuous monitoring instrumentation
- I.E.10.b.3      Copies of all reports and records required by this Permit
- I.E.10.b.4      Certification required by 40 CFR Part 264.73(b)(9)
- I.E.10.b.5      All data used to complete the Application for this Permit.

These records comprise the “operating record” for the permit. The Permittee shall retain all of this information for (1) at least 3 years from the date of the sample, measurement, report, certification, or application; or (2) periods specified elsewhere in this Permit.

The Permittee shall also retain at the facility, all monitoring records from all surface water sampling, seep sampling, soil sampling, sediment



sampling, ground water monitoring wells, and associated ground water surface elevations. The Permittee shall retain all of this information until 3 years following the end of the corrective action instituted to address releases of hazardous waste or hazardous waste constituents from any solid waste management unit regulated under this Permit. Required information and data must be kept in the operating record of the facility until closure of the facility. The retention period for all records required is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Regional Administrator (40 CFR Parts 264.74[b], 266.102[e][10], and 270.30[j][2]).

**I.E.10.c**      **Records of monitoring information shall include the following (40 CFR Part 270.30[j][3]):**

**I.E.10.c.1**      **Date, exact place, and time of sampling or measurements**

**I.E.10.c.2**      **Names of personnel who performed the sampling or measurements;**

**I.E.10.c.3**      **Date(s) on which analyses were performed**

**I.E.10.c.4**      **Names of personnel who performed the analyses**

**I.E.10.c.5**      **Analytical techniques or methods used**

**I.E.10.c.6**      **Results of analyses**

**1.E.10.d**      **Electronic records of the following may be maintained, in lieu of paper copies of these documents:**

**I.E.10.d.1**      **Continuous emissions monitor data**

**I.E.10.d.2**      **Cement kiln operating condition parameter data**

**I.E.10.d.3**      **Air pollution control system operating condition parameter data**

**I.E.10.d.4**      **Analytical data**

If paper copies are not retained, backup electronic copies of all data must be prepared on a weekly basis. The backup system shall be independent of (1) the systems used to collect the data and (2) the systems used to store the primary copy. Additionally, the backup system will be located at a secure, off-site facility, located at *[Insert name, location, and address of off-site secure repository]* \_\_\_\_\_.

All data stored in electronic format must be available for review at the facility at all times by regulatory personnel.

- I.E.10.e** The Permittee shall submit all monitoring results at the intervals specified in this Permit.

**I.E.11 Reporting Planned Changes**

The Permittee shall notify the Regional Administrator promptly of any planned physical alterations or additions to the permitted facility (40 CFR Part 270.30[I][1]).

**I.E.12 Reporting Anticipated Noncompliance**

The Permittee shall notify the Regional Administrator, in advance, of any planned changes, in the permitted facility or activity, that may result in noncompliance with Permit requirements. Advance notice shall not constitute a defense for any noncompliance (40 CFR Part 270.30[I][2]).

**I.E.13 Certification of Construction or Modification**

*Note: As stated earlier, the language in this Permit is based on the assumption that the facility has operated the cement kiln under interim status that is now being required to obtain a Part B Permit. As part of the permitting process, the facility is proposing to construct other units (greater than 90 day container storage areas and tanks) associated with the cement kiln operations. For new cement kilns and for modifications to existing cement kilns, this condition must be modified to indicate (1) the information in this Permit and the Part B permit application accurately describes the new cement kiln and that it is in compliance with the Permit or (2) the modifications have been completed in compliance with the Permit and applicable regulations and that an inspection of the modifications has been completed.*

Before the Permittee may begin storing hazardous waste in the newly constructed hazardous waste storage tank—for other than less-than-90-day storage during construction and shakedown phases—or burning hazardous waste in the newly constructed cement kiln, the following conditions must be met:

- I.E.13.a** Permittee submits, to the Regional Administrator—by certified mail or hand delivery—a letter, signed by the Permittee and an independent registered professional engineer, stating that the units have been constructed in compliance with the Permit and applicable regulations (40 CFR Part 270.30[1][2][I]).
- I.E.13.b** Regional Administrator either inspects the newly constructed facility and determines that it is in compliance with the conditions of the Permit (40 CFR Part 270.30[1][2][ii][A]); waives the inspection; or fails to notify

the Permittee, within 15 calendar days of submittal, that the facility will be inspected (40 CFR Part 270.30[1][2][ii][B]).

The Permittee must also follow these procedures whenever these units are modified, except as provided in 40 CFR Part 270.42. (40 CFR Part 270.30[1][2]).

#### **I.E.14 Transfer of Permits**

This Permit is not transferable to any person, except after notice to the Regional Administrator. Pursuant to 40 CFR Part 270.40, the Regional Administrator may require modification, or revocation and reissuance, of the Permit to change the name of the Permittee and incorporate other requirements that may be necessary under RCRA. Before transferring ownership or operation of the facility during the operating life of the facility, the Permittee shall notify the new owner or operator in writing of the requirements of this Permit and 40 CFR Parts 264, 266, and 270 (40 CFR Parts 264.12[c] and 270.30[1][3]).

#### **I.E.15 Twenty-Four Hour Reporting**

**I.E.15.a** The Permittee shall report to the Regional Administrator any noncompliance that may endanger human health or the environment. Any such information shall be promptly reported verbally, but no later than 24 hours after the Permittee becomes aware of the circumstances. The report shall include the following:

**I.E.15.a.1** Information concerning release of any hazardous waste that may endanger public drinking water supplies.

**I.E.15.a.2** Information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility that could threaten the environment or human health outside the facility.

**I.E.15.b** The description of the release or discharge and its cause shall include, but not be limited to, the following:

**I.E.15.b.1** Name, title, and telephone number of the person making the report

**I.E.15.b.2** Name, address, and telephone number of the owner or operator of the facility

**I.E.15.b.3** Name, address, and telephone number of the facility

**I.E.15.b.4** Date, time, and type of incident

- I.E.15.b.5**      **Location and cause of incident**
- I.E.15.b.6**      **Identification and quantity of material(s) involved**
- I.E.15.b.7**      **Extent of injuries, if any**
- I.E.15.b.8**      **Assessment of actual or potential hazards to the environment and human health outside the facility, where applicable**
- I.E.15.b.9**      **Description of any emergency action taken to minimize the threat to human health and the environment**
- I.E.15.b.10**     **Estimated quantity and disposition of recovered material that resulted from the incident**
- I.E.15.b.11**     **Any other information required to fully evaluate the situation and to develop an appropriate course of action**

**I.E.15.c**      **In addition to the verbal notification required under Conditions I.E.15.a and I.E.15.b, a written report shall also be provided within 5 calendar days after the Permittee becomes aware of the circumstances.**

**The written report shall include, but not be limited to, the following:**

- I.E.15.c.1**      **Name, address, and telephone number of the person reporting**
- I.E.15.c.2**      **Description of the incident (noncompliance and/or release of discharge of hazardous waste), including cause, location, extent of injuries, if any, and an assessment of actual or potential hazards to the environment and human health outside the facility, where applicable)**
- I.E.15.c.3**      **Period(s) in which the incident (noncompliance and/or release or discharge of hazardous waste) occurred, including exact dates and times;**
- I.E.15.c.4**      **Whether the results of the incident continue to threaten human health and the environment, which will depend on whether the noncompliance has been corrected and/or the release or discharge of hazardous waste has been adequately cleaned up**
- I.E.15.c.5**      **If the noncompliance has not been corrected, the anticipated period for which it is expected to continue and**

the steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance

The Regional Administrator may waive the requirement that written notice be provided within 5 calendar days; however, the Permittee will then be required to submit a written report within 15 calendar days of the day on which the Permittee is required to provide verbal notice, in accordance with Conditions I.E.15.a and I.E.15.b of this Permit (40 CFR Part 270.30[1][6]).

#### **I.E.16 Other Noncompliance**

The Permittee shall report all instances of noncompliance not reported under Condition I.E.15. When any other reports required by this Permit are submitted. The reports shall contain the information listed in Condition I.E.15 (40 CFR Part 270.30[1][10]).

#### **I.E.17 Other Information**

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Application, or submitted incorrect information in the Application or in any report to the Regional Administrator, the Permittee shall promptly notify the Regional Administrator of any incorrect information or previously omitted information, submit the correct facts or information, and submit a written explanation of the circumstances of the incomplete or inaccurate submittal (40 CFR Part 270.30(l)(11)).

#### **I.F SIGNATORY REQUIREMENT**

All applications, reports, or information required by this Permit, or otherwise submitted to the Regional Administrator, shall be signed and certified in accordance with 40 CFR Part 270.11 (40 CFR Part 270.30[k]).

#### **I.G REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE REGIONAL ADMINISTRATOR**

All reports, notifications, or other submittals that this Permit requires to be sent or given to the Regional Administrator should be sent by certified mail or express mail, or hand-delivered to the U.S. Environmental Protection Agency, Region *[Insert EPA Region Number]* \_\_, Waste Management Division at the following address *[Insert the address and telephone number of the Regional Administrator]*:

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#### **I.H CONFIDENTIAL INFORMATION**

In accordance with 40 CFR Part 2, any information required by this Permit, or otherwise submitted to the Regional Administrator, may be claimed as confidential by the Permittee. Any such claim must be asserted at the time of submittal in the manner prescribed on the application form or instructions or, in the case of other submittals, by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submittal, the Regional Administrator may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (40 CFR Part 270.12).

## **I.I DOCUMENTS TO BE MAINTAINED AT THE FACILITY**

*Note: Relevant sections of the Part B permit application must be attached to the Permit in order to facilitate compliance.*

The Permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and all amendments, revisions, and modifications to these documents.

### **I.I.1 Waste Analysis Plan**

Waste Analysis Plan (Attachment [*Insert Attachment letter*] \_\_ of this Permit), as required by this Permit and 40 CFR Parts 264.13 and 266.102(a)(2)(ii).

### **I.I.2 Inspection Schedules and Logs**

Inspection schedules and logs (Attachment [*Insert Attachment letter*] \_\_ of this Permit), as required by this Permit and 40 CFR Parts 264.15(b)(2) and 266.102(a)(2)(ii).

### **I.I.3 Personnel Training Documents and Records**

Personnel training documents and records, as required by this Permit and 40 CFR Parts 264.16(d) and 266.102(a)(2)(ii).

### **I.I.4 Contingency Plan**

Contingency Plan (Attachment [*Insert Attachment letter*] \_\_ of this Permit), as required by this Permit and 40 CFR Parts 264.53(a) and 266.102(a)(2)(iv).

### **I.I.5 Operating Record**

Operating record, as required by this Permit and 40 CFR Parts 264.73, 266.102(a)(2)(v), and 266.102(e)(8)(v).

### **I.I.6 Closure and Post-Closure Plan**

Closure Plan (Attachment [*Insert Attachment letter*] \_\_ of this Permit), and Post-Closure Plan (Attachment [*Insert Attachment letter*] \_\_ of this Permit), as required by this Permit and 40 CFR Parts 264.112(a), 264.118(a), and 266.102(a)(2)(vii).

**I.I.7 Closure and Post-Closure Cost Estimate**

Annually adjusted closure and post-closure cost estimate, as required by this Permit and 40 CFR Parts 264.142(d) and 264.144(d).

**I.I.8 Independent Tank System Assessment**

Independent tank system assessment, installation, and repair certifications, as required by this Permit and 40 CFR Part 264.192(g).

**I.I.9 Copy of Permit**

Copy of this Permit, attachments to this Permit, and the current Application.

**I.I.10 Other Documents**

All other documents required by Condition I.E.10 of this Permit, [*Insert as appropriate*] \_\_\_\_\_, and \_\_\_\_\_.

**I.J ATTACHMENTS AND DOCUMENTS INCORPORATED BY REFERENCE**

All attachments and documents required by this Permit—including all plans and schedules—are, upon approval by the Regional Administrator, incorporated into this Permit by reference and become an enforceable part of this Permit. Since required items are essential elements of this Permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action under Section 3008 of RCRA which may include fines, suspension, or revocation of the Permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this Permit. Written requests for extensions of due dates for submittals may be granted by the Regional Administrator in accordance with Condition I.B of this Permit.

If the Regional Administrator determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Regional Administrator may modify this Permit according to procedures in Condition I.B of this Permit.

**I.J.1 Precedence of Permit over Attachments**

If any of the Attachments to this Permit are found to conflict with any of the conditions in Modules I through IX of this Permit, the Condition of this Permit shall take precedence.

**I.J.2 Precedence of Permit over Application**

If any Section of the Application is found to be in conflict with any condition of this Permit, the Condition of this Permit shall take precedence.

**I.J.3 Precedence of Attachment over Application**

If any Section of the Application is found to be in conflict with any attachment to this Permit, the attachment to this Permit shall take precedence.

**I.K COORDINATION WITH THE CLEAN AIR ACT**

The facility shall comply with all applicable CAA and RCRA permit limits. In such case where two or more operating limitations apply, the most stringent operating limitations shall ultimately take precedence.



## MODULE II—GENERAL FACILITY CONDITIONS

*Note: This permit module contains conditions covering the general facility requirements of 40 CFR Part 264, Subparts B through H. This module must be included in all RCRA Permits for the cement kilns.*

### II.A DESIGN AND OPERATION OF FACILITY

*Note: The language in this Condition must reference approved process flow diagrams and piping and instrumentation diagrams submitted as part of the Part B permit application.*

The Permittee shall design, construct, maintain, and operate the cement kiln and other units associated with the cement kiln in a manner that minimizes the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water, or surface water that could threaten human health or the environment (40 CFR Part 264.31). The cement kiln and associated units shall be constructed in accordance with the following engineering drawings and specifications:

*[List drawings and specifications]*

### II.B RECEIPT OF HAZARDOUS WASTE FROM FOREIGN SOURCE

*Note: The language in this Permit is based on the assumption that the hazardous waste that is stored in the hazardous waste storage tank and burned in the cement kiln is generated at an off-site, domestic source. If the facility receives hazardous waste from a foreign source, additional conditions must be included in the Permit, in accordance with 40 CFR Part 264.12(a) and other applicable regulations.*

The Permittee is not authorized to receive, and therefore shall not receive, hazardous waste from a foreign source for storage in the hazardous waste storage tank or burning in the cement kiln.

### II.C RECEIPT OF OFF-SITE HAZARDOUS WASTE

The Permittee must notify all sources of off-site waste that it is authorized, under the terms of the Conditions outlined in this Permit, to receive hazardous waste from an off-site source for storage and subsequent treatment in the cement kiln (40 CFR Part 264.12[b]). A copy of this notification must be placed in the operating record for each source.

### II.D SPECIFIC WASTE BAN

The Permittee shall not place in any land disposal unit the wastes specified in 40 CFR Part 268 after the effective date of the prohibition unless the Administrator has

established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this Permit.

#### **II.D.1 Storage of Restricted Wastes**

The Permittee may store wastes restricted under 40 CFR Part 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of 40 CFR Part 268.50(a)(2) including, but not limited to, clearly marking each tank or container.

#### **II.D.2 Compliance with 40 CFR Part 268.7**

The Permittee is required to comply with all requirements of 40 CFR Part 268.7 as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the Permittee, pursuant to 40 CFR Part 270.42.

#### **II.D.3 Waste Analysis of Restricted Waste**

The Permittee shall perform a waste analysis at least annually or when a process changes, to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record.

#### **II.D.4 Land Disposal Restriction**

The Permittee must comply with requirements restricting placement of hazardous wastes in or on land which become effective by statute or promulgated under 40 CFR Part 268, regardless of requirements in the Permit. Failure to comply with the regulations may subject the Permittee to enforcement action under Section 3008 of RCRA.

#### **II.E GENERAL WASTE ANALYSIS**

*Note: The Permit Writer should determine the frequency at which the hazardous waste should be sampled and analyzed, and include the appropriate frequency in this Permit.*

The Permittee shall follow the waste analysis procedures required by 40 CFR Part 264.13, as described in the Waste Analysis Plan, which is included as Attachment [Insert Attachment letter] \_\_ of this Permit (40 CFR Parts 264.13 and 266.102[a][2][ii]).

The Permittee must conduct sampling and analysis needed to ensure that the hazardous waste burned in the cement kiln is within the physical and chemical composition limits specified in this Permit. (40 CFR Part 266.102[b][2]).

#### **II.F SECURITY PROCEDURES**

The Permittee shall comply with the security provisions of 40 CFR Part 264.14(b) and (c) and as described in [*Include reference to the Application*] \_\_\_\_\_ of the permit application (40 CFR Parts 264.14 and 266.102[a][2][ii]).

## **II.G GENERAL INSPECTION REQUIREMENTS**

### **II.G.1 Inspection Schedule**

The Permittee shall inspect the facility regularly in accordance with the inspection schedule that is included as Attachment [*Insert Attachment letter*] \_\_ to this Permit (40 CFR Parts 264.15[b] and 266.102[a][2][ii]).

### **II.G.2 Inspection Remedies**

The Permittee shall remedy any deterioration or malfunction of equipment or structures discovered during an inspection, in accordance with 40 CFR Part 264.15(c) (40 CFR Part 266.102[a][2][ii]).

### **II.G.3 Inspection Records**

The Permittee shall record all inspections in the inspection logs, in accordance with 40 CFR Part 264.15(d), and keep them as part of the operating record, in accordance with 40 CFR Part 264.73(b)(5) and Condition I.I of this Permit (40 CFR Parts 266.102[a][2][ii] and 266.102[a][2][v]).

## **II.H PERSONNEL TRAINING**

### **II.H.1 Training Requirements**

The Permittee shall ensure that all personnel who handle hazardous waste are trained in hazardous waste management, safety procedures, and emergency procedures, as applicable to their job description, in accordance with 40 CFR Part 264.16, and that they follow the outlines and procedures in [*Include reference to the Application*] \_\_\_\_\_ of the Application (40 CFR Part 266.102[a][2][ii]).

### **II.H.2 Training Schedule**

Facility personnel must successfully complete the requirements of hazardous waste training described in Condition II.H.1 of this Permit within six months after the date of their employment or assignment to a facility, or to new position at a facility. Employees shall not work in unsupervised positions until they have completed the training requirements identified in Condition II.H.1 of this Permit (40 CFR Part 264.16[b]).

### **II.H.3 Training Records**

The Permittee shall maintain a copy of the personnel training documents and records, in accordance with 40 CFR Part 264.16(d) and (e) and Condition I.I of this Permit (40 CFR Part 266.102[a][2][ii]).

## **II.I GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES**

*Note: It is assumed that the hazardous waste being stored in the hazardous waste storage tank and burned in the cement kiln is ignitable and reactive. If the hazardous waste cannot be classified as ignitable, reactive, or incompatible with other wastes at the facility, this condition in the Permit can be deleted.*

The Permittee shall comply with the requirements of 40 CFR Part 264.17(a) for handling of ignitable, reactive, or incompatible wastes, in accordance with the precautions described in [Include reference to the Application] \_\_\_\_\_ of the Application (40 CFR Part 266.102[a][2][ii]).

## **II.J LOCATION STANDARDS**

*Note: If the facility will be located in a sensitive area (for example, a seismically active area or floodplain), the Permit Writer should include permit conditions considered necessary to protect human health and the environment, in accordance with 40 CFR Part 264.18. Additionally, some States may have developed their own location standards which may be more stringent than required under Federal regulation. For this Permit, it was assumed that, based on the facility's location, there are no conditions that must be included in the Permit.*

## **II.K PREPAREDNESS AND PREVENTION**

The Permittee shall comply with all applicable requirements, in accordance with 40 CFR Part 264, Subpart C, including those in the following Conditions:

### **II.K.1 Required Equipment**

*Note: If the Permittee has demonstrated to the Regional Administrator that any of the equipment specified in 40 CFR Parts 264.32 and 264.52(e) is not required, this should be recorded, and the Permit Writer may delete this Condition of the Permit.*

At a minimum, the Permittee shall maintain, at the facility, the equipment required in 40 CFR Parts 264.32 and 264.52(e), and specified in the Contingency Plan included as Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit (40 CFR Part 266.102[a][2][iii] and [iv]).

### **II.K.2 Testing and Maintenance of Equipment**

*Note: If the inspection schedule is not included as an attachment to this Permit, proper reference to the Application must be provided.*

The Permittee shall test and maintain the equipment referred to in Condition II.K.1 of this Permit, in accordance with the inspection schedule that is included as Attachment

*[Insert Attachment letter]* \_\_ of this Permit (40 CFR Parts 264.15[b][1], 264.33, and 266.102[a][2][ii] and [iii]).

#### **II.K.3 Arrangements with Local Authorities**

The Permittee shall maintain preparedness and prevention arrangements with state and local authorities, as required by 40 CFR Part 264.37. If state or local authorities refuse to enter into such arrangements, the Permittee must document this refusal in the operating record to be maintained in accordance with Condition I.I of this Permit (40 CFR Part 266.102[a][2][iii]).

#### **II.L CONTINGENCY PLAN**

The Permittee shall comply with all applicable requirements in 40 CFR Part 264, Subpart D, including the following Conditions:

#### **II.L.1 Implementation of Contingency Plan**

The Permittee shall immediately carry out the provisions of the Contingency Plan included as Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment (40 CFR Parts 264.51[b] and 266.102[a][2][iv]).

#### **II.L.2 Copies of Contingency Plan**

The Permittee shall provide a copy of the Contingency Plan and all revisions to the local police departments, fire departments, hospitals, and state and local emergency response teams that may be asked to provide emergency services (40 CFR Parts 264.53[b] and 266.102[a][2][iv]).

#### **II.L.3 Amendments to Contingency Plan**

The Permittee shall review, and immediately amend, if necessary, the Contingency Plan, in accordance with 40 CFR Part 264.54 (40 CFR Part 266.102[a][2][iv]).

### **II.M RECORD KEEPING AND REPORTING**

*Note: The language in this Permit is based on the assumption that the hazardous waste stored in the hazardous waste storage tank and burned in the cement kiln is generated off-site. If no wastes are generated off-site, the manifest reporting requirements of this Condition do not apply.*

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with those in the following Conditions:

#### **II.M.1 Operating Record**

The Permittee shall maintain a written or electronic operating record at the facility, in accordance with 40 CFR Part 264.73 (40 CFR Part 266.102[a][2][v]).

#### **II.M.2 Manifest Records**

The Permittee shall maintain with the manifest and manifest discrepancy record keeping and reporting requirements of 40 CFR Parts 264.71 and 264.72. The Permittee is prohibited from receiving any unmanifested waste (as defined by 40 CFR Part 264.76).

#### **II.M.3 Waste Minimization**

The Permittee shall, by *[Insert the date]* \_\_\_\_\_ of each year, submit to the Regional Administrator a certification in accordance with 40 CFR Part 264.73(b)(9), and signed in accordance with 40 CFR Part 270.11 and Condition I.F of this Permit, that (1) the Permittee has a program in place to reduce the volume and toxicity of hazardous waste generated to the degree that the Permittee determines is economically practicable; and (2) the proposed method of storage in the hazardous waste storage tank and burning in the cement kiln is the most practicable method, currently available to the Permittee, of minimizing the present and future threat to human health and the environment (40 CFR Part 266.102[a][2][v]). The waste minimization program must include the following:

- II.M.3.a Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility
- II.M.3.b Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities
- II.M.3.c Any source reduction and/or recycling measures implemented in the last five years or planned for the near future
- II.M.3.d An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste
- II.M.3.e Factors that have prevented implementation of source reduction and/or recycling
- II.M.3.f Sources of information on source reduction and/or recycling received at the facility (for example, local government, trade associations, or suppliers)
- II.M.3.g An investigation of additional waste minimization efforts which could be implemented at the facility. This investigation shall analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis shall include an assessment of the technical feasibility, cost, and potential waste reduction for each option.
- II.M.3.h The Permittee shall submit a flow chart or matrix detailing all hazardous wastes it produces by quantity, type, and building or area
- II.M.3.i The Permittee shall demonstrate the need to use those processes which produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste



The Permittee shall include this certified plan in the operating record.

#### **II.M.4 Biennial Report**

The Permittee shall, by March 1 of each even-numbered year, submit to the Regional Administrator, a biennial report covering the activities of each of the permitted hazardous waste management units at the facility, in accordance with 40 CFR Part 264.75 (40 CFR Part 266.102[a][2][v]).

#### **II.M.5 Other Reports**

The Permittee shall submit to the Regional Administrator any additional reports specified in 40 CFR Part 264.77 (40 CFR Part 266.102[a][2][v]).

### **II.N GENERAL CLOSURE AND POST-CLOSURE CARE REQUIREMENTS**

The Permittee shall comply with all applicable requirements in 40 CFR Part 264, Subpart G, including those in the following Conditions:

#### **II.N.1 Performance Standard**

The Permittee shall close the facility and conduct post-closure care, in accordance with the requirements of 40 CFR Parts 264.111 and 264.117, and in accordance with the Closure and Post-Closure Plan included as Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit (40 CFR Part 266.102[a][2][vii]).

#### **II.N.2 Amendment to Closure and Post-Closure Plan**

Whenever necessary, the Permittee shall amend the Closure and Post-Closure Plan, included as Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit, in accordance with 40 CFR Parts 264.112(c) and 264.118(d). The Permittee shall submit a written notification or request to the Regional Administrator for a Permit modification to amend the Closure and Post-Closure Plan (40 CFR Part 266.102[a][2][vii]).

#### **II.N.3 Notification of Closure**

The Permittee shall notify the Regional Administrator in writing at least 45 days before the date on which it expects to begin partial or final closure of the hazardous waste storage tank or the cement kiln at the facility, whichever is earlier (40 CFR Parts 264.112[d] and 266.102[a][2][vii]).

#### **II.N.4 Time Allowed for Closure**

After receiving the final volume of hazardous waste at the hazardous waste management units or the facility, the Permittee shall treat, remove from the units or facility, or dispose of on-site, all hazardous waste and shall complete closure activities, in accordance with 40 CFR Part 264.113, and the schedule specified in the Closure Plan included as Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit (40 CFR Part 266.102[a][2][vii]).



## **II.N.5 Disposal or Decontamination of Equipment, Structures, and Soils**

The Permittee shall decontaminate, and/or dispose of, all contaminated equipment, structures, and soils, as required by 40 CFR Part 264.114, and in accordance with the Closure Plan included as Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit (40 CFR Part 266.102[a][2][vii]).

## **II.N.6 Certification of Closure**

The Permittee shall provide a certification statement for each hazardous waste management unit when that hazardous waste management unit has been closed in accordance with the applicable specifications in the Closure Plan included as Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit. The certification must be signed in accordance with 40 CFR Part 270.11 and Condition I.F of this Permit, and by an independent registered professional engineer (40 CFR Parts 264.115 and 266.102[a][2][vii]).

## **II.N.7 Post-Closure Care and Use of Property**

The Permittee shall conduct post-closure care of all on-site disposal units in accordance with 40 CFR Part 264.117 and the Post-Closure Care Plan included as Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit.

## **II.N.8 Notification of Post-Closure**

The Permittee shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Regional Administrator in writing within 60 days after closure, all disposal, post-closure care, and deed notation information required under 40 CFR Part 264.119 (266.102[a][2][vii]).

## **II.N.9 Certification of Completion of Post-Closure Care**

The Permittee shall provide a certification statement for each hazardous waste management unit when the post-closure care period has been completed for each hazardous waste management unit, in accordance with the applicable specifications in the Post-Closure Plan included as Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit. The certification must be signed in accordance with 40 CFR Part 270.11 and Condition I.F of this Permit, and by an independent registered professional engineer (40 CFR Parts 264.120 and 266.102[a][2][vii]).

## **II.O COST ESTIMATE FOR FACILITY CLOSURE AND POST-CLOSURE**

### **II.O.1 Adjustment for Inflation**

*Note: If the Permittee is using the financial test or corporate guarantee, the Permit Writer should substitute this condition with the following: “The Permittee must adjust the closure cost estimate for inflation within 30 days after the close of the firm’s fiscal year and before submittal of updated information to the Regional Administrator, as specified in 40 CFR Part 264.143(f)(3) (40 CFR Parts 264.142[b] and 266.102[a][2][viii]).”*

The Permittee must adjust the closure and post-closure cost estimate, included as Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit, for inflation within 60 days before the anniversary date of the establishment of the financial instrument(s) used to comply with 40 CFR Parts 264.143 and 264.145 and Condition II.O of this Permit (40 CFR Parts 264.142[b], 264.144[c], and 266.102[a][2][viii]).

#### **II.O.2 Revision due to Changes in Closure and Post-Closure Plan**

The Permittee must revise the closure and post-closure cost estimates whenever there is a change in the facility’s Closure or Post-Closure Plan, included as Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit, if the change in the Closure or Post-Closure Plan increases the cost of closure or post-closure (40 CFR Parts 264.142[c], 264.144[c], and 266.102[a][2][viii]).

#### **II.O.3 Copy at Facility**

The Permittee must keep, at the facility, the latest closure and post-closure cost estimates, as required by 40 CFR Parts 264.142(d), 264.144(d), and Condition I.I of this Permit (40 CFR Parts 264.142[c] and 266.102[a][2][viii]).

#### **II.P FINANCIAL ASSURANCE FOR FACILITY CLOSURE AND POST-CLOSURE**

*Note: The language in this Permit is based on the assumption that the facility is an interim status facility that has previously been subject to RCRA. Requirements for submitting necessary financial assurance documentation to the Regional Administrator at least 60 days before first receiving the hazardous waste for storage or burning applies only to new facilities.*

The Permittee shall demonstrate continuous compliance with 40 CFR Parts 264.143, 264.145, and 264.146 by providing documentation of financial assurance, as required by 40 CFR Part 264.151, in at least the amount of the cost estimate required by Condition II.N of this Permit. Pursuant to 40 CFR Parts 264.143 and 264.145, changes in financial assurance mechanisms must be approved by the Regional Administrator. The Permittee shall submit the necessary financial assurance documentation to the Regional Administrator at least 60 days before first receiving the hazardous waste for storage or burning (40 CFR Parts 264.143 and 266.102[a][2][viii]).

#### **II.Q LIABILITY REQUIREMENTS**

*Note: The language in this Permit is based on the assumption that the facility is a new facility that is subject to RCRA for the first time. The requirement to submit the necessary insurance documentation to the Regional Administrator at least 60 days before first receiving the hazardous waste for storage or burning applies only to new facilities.*

The permittee shall demonstrate continuous compliance with the requirement of 40 CFR Part 264.147(a) to obtain and maintain liability insurance coverage for sudden accidents in the amount of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs. The Permittee shall submit the necessary insurance documentation to the Regional Administrator at least 60 days before first receiving the hazardous waste for storage or burning. The insurance must take effect before the initial receipt of hazardous waste (40 CFR Parts 264.147[a][1][i] and 266.102[a][2][viii]).

**II.R INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS**

The permittee shall comply with the requirements of 40 CFR Part 264.148, whenever necessary (40 CFR Part 266.102[a][2][viii]).

## MODULE III—STORAGE IN CONTAINERS

### III.A UNIT DESCRIPTION—CONTAINER STORAGE UNITS

[ *n* ] hazardous waste container storage units are covered by this Permit. These units are identified as [ CS<sub>1</sub> ], [ CS<sub>2</sub> ], . . . [ CS<sub>*n*</sub>, where *n*= the number of container storage units ]. [ CS<sub>1</sub> ] is constructed of [ *Describe construction materials* ] \_\_\_\_\_, measures [ *Give dimensions* ] \_\_\_\_\_, and has a total storage capacity of [ *Insert capacity, including units such as gallons, cubic feet, or cubic yards* ] \_\_\_\_\_. [ CS<sub>*n*</sub> ] is constructed of [ *Describe construction materials* ] \_\_\_\_\_, measures [ *Give dimensions* ] \_\_\_\_\_, and has a total storage capacity of [ *Insert capacity, including units such as gallons, cubic feet, or cubic yards* ] \_\_\_\_\_.

[ CS<sub>1</sub> ] is designed to store [ *Describe types of hazardous waste stored (liquid, solid)* ] \_\_\_\_\_ in [ *Describe types of containers* ] \_\_\_\_\_ and has secondary containment as described in Attachment [ *List Attachment letter* ] \_\_\_\_\_ of this Permit. [ CS<sub>*n*</sub> ] is designed to store [ *Describe types of hazardous waste stored (liquid, solid)* ] \_\_\_\_\_ in [ *Describe types of containers* ] \_\_\_\_\_ and has secondary containment as described in Attachment [ *List Attachment letter* ] \_\_\_\_\_ of this Permit.

Subject to the requirements of Permit Condition III.B, the Permittee may store hazardous waste generated on-site and off-site at the [ *n* ] units covered by this Permit and shall not store hazardous waste at any other location at the facility. Hazardous waste received from off-site must be managed in accordance with Permit Condition III.H.

### III.B PERMITTED AND PROHIBITED WASTE IDENTIFICATION

#### III.B.1 Permitted Waste Storage

The Permittee shall operate and maintain the container storage units in accordance with 40 CFR Part 264 Subpart I, and the specification and design criteria submitted in the Part B Permit Application. Subject to the terms of this Permit, the Permittee is allowed to store, in the container storage unit described in Condition III.A, the hazardous waste identified in Attachment [ *Insert Attachment letter* ] \_\_\_\_\_ of this Permit. The Permittee is allowed to store, in each container storage unit, a maximum volume of hazardous waste not to exceed the storage capacity of each container storage unit, as described in Condition III.A.

#### III.B.2 Prohibited Waste Storage

The Permittee is prohibited from storing hazardous waste that is not listed in Attachment [ *Insert Attachment letter* ] \_\_\_\_\_ of this Permit. Nonhazardous wastes and other containerized materials being stored in the container storage units are also subject to the terms of this Permit.

### **III.C CONDITION OF CONTAINERS**

The Permittee shall manage the containers holding hazardous waste in compliance with 40 CFR Part 264.171.

### **III.D COMPATIBILITY OF WASTE WITH CONTAINERS**

The Permittee shall store hazardous waste in containers in compliance with 40 CFR Part 264.172.

### **III.E MANAGEMENT OF CONTAINERS**

*Note: The Permit Writer should specifically identify the location in which containers of waste may be stored or treated where there are concerns regarding incompatible wastes.*

The Permittee shall manage containers holding hazardous waste in compliance with 40 CFR Part 264.173.

### **III.F CONTAINMENT SYSTEMS**

The Permittee shall design and operate secondary containment systems in compliance with 40 CFR Part 264.175.

### **III.G INSPECTION SCHEDULES AND PROCEDURES**

The Permittee shall inspect the container storage units in accordance with 40 CFR Part 264.174 and Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit. The Permittee shall also document these inspections in accordance with 40 CFR Part 264.15(c) and Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

### **III.H RECORD KEEPING**

The Permittee shall place the results of all waste analyses and trial tests—and any other documentation showing compliance with the requirements of Permit Conditions III.K.1 and III.K.2 and 40 CFR Parts 264.17 and 264.177—in the facility operating record, in accordance with 40 CFR Part 264.73.

### **III.I CLOSURE**

The Permittee shall close each hazardous waste container storage unit identified in Permit Condition III.A in accordance with 40 CFR Parts 264.17(a) and 264.176 and the Closure Plan in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

### **III.J SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE**

#### **III.J.1 Duty to Comply with 40 CFR Part 264.176**

The Permittee shall comply with 40 CFR Part 264.176.

### III.J.2 Duty to Comply with 40 CFR Part 264.17(a)

The Permittee shall comply with 40 CFR Part 264.17(a) and follow the procedures for managing ignitable or reactive hazardous waste specified in Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit.

### III.K SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

#### III.K.1 Duty to Comply with 40 CFR Part 264.177(a)

The Permittee shall comply with 40 CFR Part 264.177(a) by following the procedures specified in Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit.

#### III.K.2 Duty to Comply with 40 CFR Part 264.177(b)

The Permittee shall comply with 40 CFR Part 264.177(b) by following the procedures specified in Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit.

#### III.K.3 Duty to Comply with 40 CFR Part 264.177(c)

The Permittee shall comply with 40 CFR Part 264.177(c) by following the procedures specified in Attachment [*Insert Attachment letter*] \_\_\_\_\_ of this Permit.

### III.L PROVISIONS FOR MANAGEMENT OF HAZARDOUS WASTE RECEIVED FROM OFFSITE

The Permittee shall not use bulk shipment containers such as railroad tank cars and tanker trucks, or transport vehicles holding containers received from offsite as container storage unit at the facility. The Permittee shall unload any properly manifested shipment of hazardous waste from the transport vehicle within [*Insert number of days*] \_\_\_\_\_ days following arrival at the site. For purposes of the Permit, arrival will be considered the day on which the transport vehicle arrives and the hazardous waste load is logged into the operating record. The date of receipt must be documented in the facility's operating record. [*Insert frequency of inspections*] \_\_\_\_\_ inspections to detect leaking containers must be conducted and documented in the facility operating record.

### III.M AIR EMISSION STANDARDS

The Permittee shall comply with 40 CFR Part 264.179 by following the procedures specified in the Part B Permit Application.

### III.N COMPLIANCE SCHEDULE

*Note: This permit condition is not necessary if the facility has no compliance issues to resolve.*

The Permittee shall document compliance with Permit Condition III [*List relevant Condition(s)*] \_\_\_\_\_ in accordance with the following schedule: [*List schedule*]



## MODULE IV—STORAGE IN TANKS

### IV.A DESCRIPTION OF TANK SYSTEMS

There are currently [ *n* ] *[Describe the type of tank, such as aboveground or below ground]* \_\_\_\_\_ tanks located in the *[Insert name of unit(s)]* \_\_\_\_\_ hazardous waste storage tank unit(s). Tank *[List tank number]* \_\_\_\_\_ has a capacity of *[Insert capacity in gallons or other appropriate units]* \_\_\_\_\_ of *[Insert physical form of waste, such as liquid or solid]* \_\_\_\_\_ hazardous waste. Tank [ *n* ] \_\_\_\_\_ has a capacity of *[Insert capacity in gallons or other appropriate units]* \_\_\_\_\_ of *[Insert physical form of waste, such as liquid or solid]* \_\_\_\_\_ hazardous waste.

*Note (optional Condition if applicable): After the Permit is issued, additional [Describe type of tank(s)] \_\_\_\_\_ with a capacity of [Insert capacity in gallons or other appropriate units] \_\_\_\_\_ are authorized to be constructed in [Insert name of unit(s)] \_\_\_\_\_ in addition to associated piping and unloading areas. A construction schedule is in Attachment [Insert reference] \_\_\_\_\_ of the Part B Permit Application. Upon completion of the additional tanks, the total permitted tank capacity will be [Insert capacity in gallons or other appropriate units] \_\_\_\_\_ of hazardous waste.*

All of the hazardous waste storage tanks are located within secondary containment having chemical-resistant coating *[Describe overfill controls]* \_\_\_\_\_ are provided on each individual tank. Each tank is filled by means of *[Describe filling method]* \_\_\_\_\_. Waste is removed from each tank by means of *[Describe unloading methods]* \_\_\_\_\_. *Note: Describe means of filling and emptying each tank individually if methods differ for individual tanks.* The secondary containment system(s) are designed to meet the requirements of 40 CFR Part 264.193. The design standards used for the fabrication of the tanks were *[List design standards (API 650, Appendix J, Edition 7, Revision I)]* \_\_\_\_\_. The tanks have been certified by an independent, professional engineer licensed in *[Insert State]* \_\_\_\_\_ to have sufficient structural integrity for storage of hazardous waste.

*Note: If some of the tanks have no secondary containment, they should be described separately in this Condition.*

### IV.B PERMITTED AND PROHIBITED WASTE

#### IV.B.1 Permitted Waste

The Permittee shall operate and maintain the hazardous waste tank(s) in accordance with 40 CFR Part 264 Subpart J, and the specification and design criteria submitted in the Part B Permit Application. Subject to the terms of this Permit, the Permittee is allowed to store, in the tanks described in Condition IV.A of this Permit, the hazardous wastes identified in the Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit. The Permittee is prohibited from storing any hazardous waste, received from offsite, in any other tank storage system.



#### IV.B.2 Prohibited Waste

The Permittee is prohibited from storing hazardous waste that is not identified in Condition IV.B.1 of this Permit.

#### IV.C SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

##### IV.C.1 Requirements for Facilities with No Secondary Containment

*Note: This permit condition should be included only if the facility has existing tank systems that have no secondary containment.*

For existing tank systems as defined by 40 CFR Part 260.10, the Permittee shall comply with 40 CFR Part 264.191.

##### IV.C.2 Requirements for Facilities Requesting a Variance

*Note: This permit condition should be included only if the Permittee is seeking a variance from the secondary containment requirements.*

For tank systems in which the Permittee is seeking a variance from the secondary containment requirements, the Permittee shall comply with 40 CFR Part 264.193 (g) and 264.193 (h).

##### IV.C.3 Duty to Comply with 40 CFR Parts 264.193(b) through (f)

The Permittee shall design, construct, and operate the secondary containment system in accordance with 40 CFR Parts 264.193(b) through (f) and Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

##### IV.C.4 Duty to Comply with 40 CFR Part 264.193

The Permittee shall comply with the following conditions until it provides secondary containment that meets the requirements of 40 CFR Part 264.193:

IV.C.4.a For underground tanks that cannot be entered, the Permittee shall comply with 40 CFR Part 264.193(I)(1) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

IV.C.4.b For underground tanks that can be entered, the Permittee shall comply with 40 CFR Part 264.193(I)(2) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

**IV.C.4.c** For ancillary equipment, the Permittee shall comply with 40 CFR Part 264.193(I)(3) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

**IV.C.4.d** The Permittee shall comply with 40 CFR Part 264.193(I)(5) by complying with Conditions IV.E and IV.G of this Permit.

#### **IV.D OPERATING REQUIREMENTS**

##### **IV.D.1 Duty to Comply with 40 CFR Part 264.194(a)**

The Permittee shall comply with 40 CFR Part 264.194(a).

##### **IV.D.2 Duty to Comply with 40 CFR Part 264.194(b)**

The Permittee shall comply with 40 CFR Part 264.194(b) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

#### **IV.E RESPONSE TO LEAKS OR SPILLS**

##### **IV.E.1 Duty to Comply with 40 CFR Part 264.196(a) through (e)**

In the event of a leak or spill from the tank system, secondary containment system, or if a system becomes unfit for use, the Permittee shall comply with 40 CFR Part 264.196(a) through (e).

##### **IV.E.2 Duty to Comply with 40 CFR Part 264.196(f)**

If the Permittee has performed extensive repairs to the tank system, as defined by 40 CFR Part 264.196(f), in accordance with 40 CFR Part 264.196(e), the Permittee shall comply with 40 CFR Part 264.196(f).

#### **IV.F INSPECTION SCHEDULES AND PROCEDURES**

##### **IV.F.1 Duty to Comply with 40 CFR Part 264.195(a) through (c)**

The Permittee shall comply with 40 CFR Part 264.195(a) through (c) by following the inspection schedule specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

##### **IV.F.2 Duty to Comply with 40 CFR Part 264.195(d)**

The Permittee shall comply with 40 CFR Part 264.195(d) by documenting the inspections required by Condition IV.F.1 of this Permit, in accordance with the procedures specified in the Part B Permit Application.

#### **IV.G CLOSURE AND POST-CLOSURE CARE**

#### IV.G.1 Duty to Comply with 40 CFR Part 264.197(a)

The Permittee shall comply with 40 CFR Part 264.197(a) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

#### IV.G.2 Duty to Comply with 40 CFR Part 264.197(b) and (c)

If the Permittee cannot close the tank system in accordance with Condition IV.G.1 of this Permit, the Permittee shall comply with 40 CFR Part 264.197(b) and (c) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

### IV.H SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

#### IV.H.1 Duty to Comply with 40 CFR Part 264.198(a)

The Permittee shall comply with 40 CFR Part 264.198(a) by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

#### IV.H.2 Duty to Comply with 40 CFR Part 264.198(b)

The Permittee shall comply with 40 CFR Part 264.198(b).

### IV.I SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTE

The Permittee shall comply with 40 CFR Part 264.199 by following the procedures specified in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

### IV.J AIR EMISSION STANDARDS

The Permittee shall comply with 40 CFR Part 264.200.

### IV.K COMPLIANCE SCHEDULE

*Note: This permit condition is not necessary if the facility has no compliance issues to resolve. The Permit Writer should include this section if the Permittee is required to complete specific steps within a specific time period, beyond those covered by other conditions of the Permit, as a criteria for retaining this Permit. Compliance schedules are generally used in cases where requirements that are supposed to be met by the Permittee before the Permit is issued are deferred for good cause until after Permit issuance. Appropriate compliance schedules included in the Application should be attached to, or incorporated in, the Permit. If the Application does not include a compliance schedule, the Permit Writer should prepare one and attach it to the Permit. Each compliance schedule should have at least two columns—one identifying the activity and one identifying the milestone or completion dates.*

The Permittee shall document compliance with Permit Condition IV [*List relevant Condition(s)*] \_\_\_\_\_ in accordance with the following schedule: [*List schedule*]

## MODULE V - MISCELLANEOUS UNITS

*This module addresses permit conditions for miscellaneous units associated with hazardous waste combustion facilities. Examples of potential miscellaneous units are carbon and catalyst regeneration, shredder, filter press, thermal desorption units, and can or drum crushers. Because these units do not have a specific RCRA permitting regulation under 40 CFR Part 264, such as Subpart I for tanks, these units are permitted under 40 CFR Part 264 Subpart X for miscellaneous units. Regulations under 40 CFR Part 264.601 require that the units conform to performance standards that are protective of human health and the environment, in addition to closure, post-closure (if applicable), financial assurance, and corrective action program requirements that apply to other RCRA units.*

*Because the Subpart X regulations are nonspecific (for example, detailed operating conditions, such as combustion temperature or waste feed rate, are not described in the regulation), the permit writer must apply, as appropriate, other unit-specific conditions (as for a tank) or create new conditions that will ensure protection of human health and the environment when the unit is operating within the limits established by the permit. For example, for a miscellaneous unit that treats waste through drying (as in a drum dryer), limits may be established similar to those for an incinerator—such as maximum waste feed rate or operating temperature.*

*The permit conditions needed to ensure protection of human health and the environment will be based on the nature of the miscellaneous unit under review. While reviewing the Part B Permit Application, the permit writer should consider design or operating parameters that can be translated into enforceable permit conditions. In addition, when faced with a miscellaneous unit that he or she has not permitted before, the Permit Writer should seek a permit drafted elsewhere (either internal or external to the reviewing agency) to learn from the efforts of the previous permit writer.*

*This module is organized in a manner such that some Conditions may be used when needed, and other Conditions may be deleted if they do not apply. The Permit Writer will be responsible for drafting the permit conditions that best apply to the miscellaneous unit under review. If there are multiple units at one facility, then this module should be repeated and modified for each unit.*

### V.A DESIGN AND CONSTRUCTION REQUIREMENTS

*The Permit Writer should include language similar to the following, and promote a complete and comprehensive Part B Permit Application. The Permit Writer may, however, include relevant sections of the Part B permit application as attachments to the Permit in order to facilitate compliance inspections.*

*The Permittee shall design and construct the [Insert the name of the miscellaneous unit] \_\_\_\_\_, as specified in Section(s) [Insert the appropriate sections] \_\_\_\_\_ and drawing(s) located in Volume [Insert the volume number of the drawings or the actual drawing numbers] \_\_\_\_\_ of the Part B Permit Application.*

*To ensure that the unit is protective, the Permit Writer may include additional language if there is a design or construction issue of critical importance. These types of permit conditions are similar to the design requirements imposed on hazardous waste combustion devices. The Permit Writer is encouraged to refer to those Conditions for suggested wording and format.*

#### **V.B PERMITTED AND PROHIBITED WASTE IDENTIFICATION**

*Depending upon the nature of the unit, the Permit Writer may need to outline the wastes that the unit may and may not receive. These types of permit conditions are similar to the waste characteristic limitations imposed on hazardous waste combustion devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall *[Insert the appropriate action: treat, store, or dispose of]* \_\_\_\_\_ only those wastes listed in Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit.

#### **V.C OPERATION AND MAINTENANCE REQUIREMENTS**

*Depending upon the nature of the unit, the Permit Writer may need to outline operating and maintenance requirements. These requirements might contain basic operating protocols and preventive maintenance schedules. These types of permit conditions are similar to the operating and maintenance requirements imposed on hazardous waste combustion devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall operate and maintain the unit in accordance with the protocols and schedules prescribed in Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit.

*The Permit Writer may consider adding an attachment to the permit, outlining preventive maintenance schedules and critical operating protocols.*

#### **V.D OPERATING CONDITIONS**

*Depending upon the nature of the unit, the Permit Writer may need to establish operating conditions. These requirements might include maximum waste feed rates, acceptable pH levels, operating temperature, or differential pressure. These types of permit conditions are similar to the operating conditions imposed on hazardous waste combustion devices and the associated air pollution control devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall operate the unit as specified in Attachment *[Insert Attachment letter]* \_\_\_\_\_ of this Permit.

**V.E WASTE FEED LIMITATIONS**

*Depending upon the nature of the unit, the Permit Writer may need to impose waste feed limitations on the waste being sent to the unit. These requirements might contain maximum allowable specific metals concentrations or maximum feed rate per metal, maximum allowable moisture content, or minimum heating value. These types of permit conditions are similar to the waste feed limitation requirements imposed on hazardous waste combustion devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall feed only quantities of waste to the unit that do not exceed the waste feed limitations in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit.

**V.F WASTE FEED CUTOFF REQUIREMENTS**

*Depending upon the nature of the unit, the Permit Writer may need to require that the unit operate with a waste feed cutoff system. This type of permit condition is similar to the waste feed cutoff requirements imposed on hazardous waste combustion devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall install, maintain, inspect, and operate an automatic waste feed cutoff system that automatically cuts off the waste feed to the unit when the monitored operating conditions deviate from those established in Attachment [Insert the Attachment number referenced in Condition V.D] \_\_\_\_\_ of this Permit.

**V.G PERFORMANCE STANDARDS**

*Depending upon the nature of the unit, the Permit Writer may need to establish performance standards. These may be similar to the performance standards established for hazardous waste combustion devices, such as carbon monoxide concentration in the stack gas, or metals and hydrogen chloride (HCl) stack gas emission rates. Also, if the performance standards are based on parameters that are monitored, the performance standards may be written in such a manner that the monitored value demonstrates compliance or noncompliance. The Permit Writer is encouraged to refer to those Conditions of the hazardous waste combustion device performance standard for additional suggested wording and format. Following is an example:*

The HCl emissions from the unit shall not exceed [Insert amount] \_\_\_\_\_ grams per second.

**V.H PERFORMANCE TEST**



*Depending upon the nature of the unit, the Permit Writer may need to require a performance test to demonstrate that the unit can meet the prescribed performance standards. This performance test is similar to a trial burn for a hazardous waste incinerator. The Permit Writer should address the technical requirements for the performance test—such as monitoring, data collection, and test protocol—should resolve them through the Part B Permit Application review process. The Permit should be reserved for requiring that the performance test be completed.*

The Permittee shall conduct a performance test on the unit in accordance with the performance test plan and test schedule in Section [Insert the applicable section] \_\_\_\_\_ of the Part B Permit Application. The Permittee shall follow the testing and reporting timetable outlined in Section [Insert the applicable section] \_\_\_\_\_ of the Part B Permit Application.

If, before submitting the performance test results, the Permittee determines, on the basis of the analytical results of the performance test, that the unit failed to achieve any of the performance standards specified in the Part B permit application, the Permittee shall notify the Regional Administrator within 24 hours of making the determination.

Upon the request of the Regional Administrator, the Permittee shall cease treating hazardous waste in the unit.

#### **V.I MONITORING AND INSPECTION REQUIREMENTS**

*Depending upon the nature of the unit, the Permit Writer may need to establish monitoring and inspection requirements. If operating conditions are established in the permit, the Permit should also require that those parameters be monitored. In addition, regular inspections are usually necessary to ensure that the unit remains in good operating condition. These requirements might include monitoring the temperature, pH levels, or differential pressure. Inspections might include visual inspections of the unit for evidence of fugitive emissions or visible leaks. These types of permit conditions are similar to the monitoring and inspection requirements imposed on hazardous waste combustion devices and the associated air pollution control devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Attachment [Insert Attachment letter that lists all of the necessary monitoring, control, and recording equipment for the unit] \_\_\_\_\_ of this permit. Waste shall not be fed to the unit if any of the monitoring instruments fail to operate properly.

#### **V.J RECORD KEEPING AND REPORTING REQUIREMENTS**

*Depending upon the nature of the unit, the Permit Writer may need to establish recordkeeping and reporting requirements. The records and reports should be derived from the operating conditions, monitored parameters, and operating protocol for the unit.*



*For example, if maximum operating temperature is a required operating condition, it should be monitored (as stated in Condition V.I of this Permit) and recorded. In addition, reports might be necessary for the Permit Writer and reviewing agency to keep track of the unit's operating history. These types of permit conditions are similar to the recordkeeping and reporting requirements imposed on hazardous waste combustion devices and the associated air pollution control devices. The Permit Writer is encouraged to refer to those Conditions for additional suggested wording and format.*

All monitoring, recording, maintenance, calibration, and test data shall be recorded, placed in the operating record, and maintained for 3 years (*the time frame can vary*).

*Note: The Permit Writer may establish a reporting schedule for various aspects of the facility's operation, and for spills and releases.*

Reports shall follow the reporting schedule outlined in Module V, Attachment [Create an Attachment that details the reports that the Permit Writer requests] \_\_\_\_\_.

## V.K AIR QUALITY PROVISIONS

*There may be instances where a RCRA and Clean Air Act (CAA) permit will be required for a miscellaneous hazardous waste unit. In those cases, the Permit Writer may include a separate Condition that either lists the CAA permit provisions or references the CAA permit number (for example, a state CAA authorized permitting agency permit number). This approach can be used to resolve conflicts between the RCRA and CAA standards. The air quality provisions Condition might include the following types of information:*

- *General air quality conditions:*

*The governing CAA regulation may specify requirements for unit design, construction, and operation. Refer to Conditions V.A through V.D, V.F, and V.G of this Permit for suggested wording and format.*

- *Emissions limit:*

*The governing CAA regulation may specify requirements for maximum emission limits for various hazardous air pollutants, particulate matter, or acid gases. Refer to Condition V.E of this Permit for suggested wording and format.*

- *Sampling, monitoring, and inspection requirements:*

*The governing CAA regulation may prescribe a program for air emissions sampling, monitoring, and inspection. Refer to Condition V.I of this Permit for suggested wording and format.*

- *Recordkeeping and reporting requirements:*

*The governing CAA regulation may indicate specific records or reports that must be maintained and/or submitted. Refer to Condition V.J of this Permit for suggested wording and format.*

*The Permit Writer must determine whether the air quality provision will be addressed in the RCRA permit or only cross-referenced to an air quality permit.*

## MODULE VI—GENERAL OPERATING REQUIREMENTS

*Note: For facilities with more than one cement kiln, a separate module should be prepared for each unit, unless the facility has provided documentation that the units are identical, in which case the same set of operating conditions will apply to all of the identical units.*

Throughout the construction, shakedown, trial burn, post-trial burn periods, as well as following the issuance of the final permit, the permittee shall comply with the conditions specified in this Permit.

This module covers the operation of the [Insert unit name] \_\_\_\_\_ cement kiln at the [Insert facility name] \_\_\_\_\_ in [Insert location and address] \_\_\_\_\_. This cement kiln is a [Insert type and model number] \_\_\_\_\_ unit manufactured by [Insert manufacturer's name and manufacture date] \_\_\_\_\_ rated for [Insert quantity] \_\_\_\_\_ tons per hour of clinker. The unit burns [List waste types] \_\_\_\_\_.

### VI.A CONSTRUCTION

#### VI.A.1 Compliance with Engineering Design Plans and Specifications

*Note: The Permit Writer may include relevant sections of the Part B permit application as attachments to the Permit in order to facilitate compliance inspections.*

The Permittee shall construct the cement kiln in accordance with the engineering design plans and specifications contained in Section [List appropriate section number] \_\_\_\_\_ of the RCRA Part B Permit Application dated [Insert date of application] \_\_\_\_\_. The Permittee shall construct the unit to minimize the possibility of a fire, explosion, or any unplanned sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

#### VI.A.2 Modifications

Modifications to the design plans and specifications shall be allowed only in accordance with Conditions I.B.1 and I.E.11 of this permit.

#### VI.A.3 Calibration and Testing

The Permittee shall conduct all calibration and testing of its process control instrumentation prior to burning waste in the cement kiln. Testing and calibration directed by this permit shall be conducted in accordance with Attachment VI-A. The Permittee shall submit a certification that all calibration and testing directed by this Permit has been completed at least 3 and no more than 7 days prior to first introduction of waste into the cement kiln.

#### **VI.A.4 Certification and Inspection**

Before the Permittee may begin burning hazardous waste in the cement kiln, the following conditions must be met:

- VI.A.4.a** Permittee submits, to the Regional Administrator—by certified mail or hand delivery—a letter, signed by the Permittee and an independent registered professional engineer, certifying that the cement kiln and air pollution control system have been constructed in compliance with the approved design plans and specifications, as modified pursuant to the Permit.
- VI.A.4.b** Regional Administrator either inspects the cement kiln and air pollution control equipment and determines that they are in compliance with the conditions of the Permit; waives the inspection; or fails to notify the Permittee, within 30 calendar days of submittal, that the facility will be inspected.

#### **VI.B INSPECTION**

##### **VI.B.1 Requirements**

- VI.B.1.a** The Permittee shall inspect the cement kiln, air pollution control equipment, and instrumentation in accordance with Attachment VI-B of this Permit.
- VI.B.1.b** The cement kiln and associated equipment (pumps, valves, pipes, fuel storage tanks, and other ancillary equipment) will be subject—on at least a daily basis—to thorough, visual inspections, when they contain hazardous waste. The purpose of these inspections will be to identify leaks, spills, fugitive emissions, and signs of tampering. The automatic waste feed cutoff system and associated alarms must be tested at least once every 7 calendar days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Regional Administrator that weekly inspections will unduly restrict or upset operations and that less frequent inspections are adequate. At a minimum, operational testing must be conducted at least once every 30 days. The testing of the AWFCO mechanism shall involve a different operating parameter every 7 days such that during the course of a given calendar quarter, all AWFCO parameters have been evaluated.

##### **VI.B.2 Records**

- VI.B.2.a** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

Written inspection records shall be part of the operating record for this Permit. At a minimum, the record shall include the following information: (1) the date the inspection was completed, (2) the piece of equipment or instrumentation inspected including part number or other appropriate descriptive identifier, (3) the type of inspection, (4) the name of person(s) conducting the inspection, (6) any other information associated with the inspection, and (7) any follow-up activity conducted as a result of the inspection. The inspection record shall be completed within 2 days of the date of the inspection, and available at [Insert location and address] \_\_\_\_\_ at all times for inspection by EPA, the State, or Local agencies.

- VI.B.2.b** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

A written record of the automatic waste feed cut-off system tests shall be part of the operating record for this Permit and available at [Insert location and address of facility] \_\_\_\_\_ at all times for inspection by EPA, the State, or Local agencies.

- VI.B.2.c** The Permittee shall record and maintain, in the operating record for this Permit, all inspection data compiled under the requirements of this Permit.

- VI.B.2.d** The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

## **VI.C MAINTENANCE**

### **VI.C.1 Requirements**

- VI.C.1.a** *Note: The Permit Writer may, however, include relevant sections of the Part B permit application as attachments to the Permit in order to facilitate compliance inspections.*

The Permittee shall maintain the cement kiln, air pollution control equipment, and instrumentation in accordance with the design plans and specifications, and preventive maintenance procedures,

contained in Sections [List section numbers] \_\_\_\_\_ of the RCRA Part B Permit Application, dated [Insert date of application] \_\_\_\_\_, and Permit Attachment VI-C. The Permittee shall maintain the unit to minimize the possibility of a fire, explosion, or any unplanned sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

**VI.C.1.b** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall maintain a written preventive maintenance schedule, consistent with Condition VI.C.1.a of this Permit. This schedule shall be available at [Insert location and address of facility] \_\_\_\_\_ at all times for inspection by EPA, the State, or Local agencies.

#### **VI.C.2 Records**

**VI.C.2.a** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall maintain a written record of all preventive maintenance and repairs performed on the cement kiln and instrumentation. At a minimum, the record shall include the following information: (1) the date the problem was discovered (if not routine preventative maintenance), (2) the piece of equipment or instrumentation repaired or maintained including part number or other appropriate descriptive identifier, (3) the type of maintenance or repair, (4) the date maintenance or repair was completed, (5) the name of person(s) conducting the maintenance or repair, (6) any data associated with any calibration and testing, and (7) the date the unit was placed back into service. The maintenance and repair record shall be completed within 2 days of the date the unit was placed back into service. This record shall be part of the operating record for this permit and available at [Insert location and address of facility] \_\_\_\_\_ at all times for inspection by EPA, the State, or Local agencies.

**VI.C.2.b** The Permittee shall record and maintain, in the operating record for this Permit, all maintenance data compiled under the requirements of this Permit.

- VI.C.2.c The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

## VI.D MONITORING

### VI.D.1 Requirements

- VI.D.1.a The Permittee shall maintain, calibrate, and operate continuous monitors that monitor and record the operating conditions specified in Condition VII of this Permit. The continuous monitoring equipment shall be as specified in Attachment VI-D to this Permit.

- VI.D.1.b *Note: Certain testing requirements may be waived by the permitting authority for facilities which meet the requirements of 40 CFR Part 266.109 and 266.110.*

Upon request of the Regional Administrator, and at no less frequently than 5-year intervals following the issuance of this Permit, the Permittee shall perform sampling and analysis of the waste feed and process exhaust emissions to verify that the operating requirements established in the Permit achieve the performance standards specified in Condition VI.F of this Permit and 40 CFR Parts 266.102, 266.104, 266.105, 266.106, and 266.107. The sampling and analysis shall be conducted in compliance with the conditions in Sections [List section numbers] \_\_\_\_\_ of the RCRA Part B Permit Application, dated [Insert date of application] \_\_\_\_\_, and Permit Attachment VI-D, except that the Regional Administrator may waive the requirements pertaining to risk assessments.

- VI.D.1.c *Note: The Permitting Authority may request data be submitted in any format or units that facilitates the completion of air modeling, risk assessment, or compliance procedures.*

Monitoring samples and measurements shall be representative of the monitored activity. Sampling methods shall be the appropriate method specified in Appendix I of 40 CFR Part 261 or an equivalent method approved by EPA, the State, or Local agencies.

Analytical methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, 1987, as revised; *Standard Methods for the Examination of Water*



and Wastewater, current edition, or equivalent methods approved by EPA.

- VI.D.1.d** *Note: The Permit Writer may wish to include the following condition for facilities where, during interim status, there is a history of significant blocks of time while burning hazardous waste when invalid data was being recorded or no data at all was being recorded (making it impossible to determine from the operating record whether various parameter limits were being exceeded).*

Except during instrument calibration periods as specified in Attachment [Insert Attachment letter] \_\_\_\_\_, the Permittee shall continuously record all data monitored by the instruments described in Attachments VI-A through VI-D to this Permit. For the purposes of this Permit, “continuously record” shall mean that at least 95 percent of the values of each operating limit required to be monitored by this permit, in any 60 minute period during which hazardous waste is introduced into either kiln, shall be accurately recorded in the Permittee’s operating record. In the event that more than 5 percent of the values of any operating limit are not accurately recorded in the operating record, or are recorded as missing or invalid data in the operating record, the Permittee shall immediately initiate an automatic waste feed cut-off, and shall cease burning hazardous waste in the affected kiln. All monitors shall record data in units corresponding to the limits specified in the operating conditions in Attachment [Insert Attachment letter] \_\_\_\_\_ to this Permit unless otherwise specified.

- VI.D.1.e** *Note: The permit writer should determine how much time is required to perform the daily calibrations. No data can be recorded while the instruments are being calibrated. It may be reasonable to establish a maximum time limit in the permit during which the monitoring instruments may be off- line for calibration. If the time period is significant, the Permit Writer may determine that duplicate monitors are necessary to ensure continuous monitoring.*

Hazardous waste may continue to be introduced into the kiln during daily continuous emission monitor system (CEMS) calibration check periods, as described in Attachment [Insert Attachment letter] \_\_\_\_\_ to this Permit. The CEMS shall be maintained according to the following schedule: (1) at least daily, a calibration check of the instrument; (2) at least daily, a system audit; (3) at least quarterly, a calibration error test; and (4) at least annually, a performance specification test.



**VI.D.2 Records**

**VI.D.2.a** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall record and maintain, in the operating record for this Permit, all monitoring data compiled under the requirements of this Permit. At a minimum, the record shall include the following information: (1) a summary of all monitoring conducted, (2) the piece of equipment, instrumentation, or sampling methods used for monitoring purposes, (3) the type of monitoring, (4) the name of person(s) responsible for completing the monitoring activities or for inspection and calibration of the monitoring device, (6) any other information associated with the monitoring activities, and (7) any follow-up activity conducted as a result of the monitoring data. Continuous monitoring information shall be updated in the record every 2 days. Other monitoring information should be entered into the operating record within 2 days following the completion of monitoring activities.

**VI.D.2.b** The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

**VI.E CALIBRATION****VI.E.1 Requirements**

**VI.E.1.a** *Note: The Permit Writer may, however, include relevant sections of the Part B permit application as attachments to the Permit in order to facilitate compliance inspections.*

The Permittee shall calibrate all instrumentation associated with the cement kiln and air pollution control equipment in accordance with the design plans and specifications, and preventive maintenance procedures, contained in Sections [List section numbers] \_\_\_\_\_ of the RCRA Part B Permit Application, dated [Insert date of application] \_\_\_\_\_, and Permit Attachment VI-C.

**VI.E.1.b** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall maintain a written calibration schedule, consistent with Condition VI.E.1.a of this Permit. This schedule shall be available at [Insert location and address of facility] \_\_\_\_\_ at all times for inspection by EPA, the State, or Local agencies.

#### VI.E.2 Records

VI.E.2.a *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall record and maintain, in the operating record for this Permit, all calibration records completed under the requirements of this Permit.

VI.E.2.b The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

#### VI.F PERFORMANCE STANDARDS

##### VI.F.1 Requirements

The Permittee shall comply with the performance standards specified in this Permit when hazardous waste is burned in the cement kiln.

VI.F.1.a The cement kiln shall achieve a DRE 99.99 percent for each of the specified principal organic hazardous constituents (POHC). The DRE shall be determined by using the method specified in 40 CFR Part 266.104(a).

[Insert POHC 1]

[Insert POHC 2]

VI.F.1.b The emissions of HCl and chlorine shall be no greater than [Insert limit] \_\_\_\_\_ and [Insert limit] \_\_\_\_\_ pounds per hour, respectively.

VI.F.1.c The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected for 7 percent by volume, of oxygen, in accordance with the formula specified in 40 CFR Part 266.105(a).

## VI.F.1.d

*Note: The permit writer must be careful to apply the proper limits as it becomes confusing when facilities use a combination of feed rate screening limits. The feed rate limits may be established either on an instantaneous or an hourly rolling average basis. Feed rate limits for carcinogenic metals (arsenic, beryllium, cadmium, chromium) and lead may be established on up to a 24 hour rolling average basis.*

Metals emissions shall not exceed the following limits in grams per hour (g/hr):

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

## VI.F.1.e

The emissions of polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF) shall not exceed [*Insert risk-based limit*] \_\_\_\_\_.

## VI.F.1.f

*Note: An alternative carbon monoxide limit above 100 ppmv may be permitted if the stack gas concentrations of hydrocarbons do not exceed 20 ppmv. However, most cement kilns regularly exceed the 100 ppmv carbon monoxide limit, and, therefore, cement kiln*

*facilities often choose to operate under the alternative carbon monoxide standard in 40 CFR Part 266.104(c) (see Permit Condition VI.F.1.f of this Permit).*

The emissions of carbon monoxide, corrected to 7 percent oxygen, shall not exceed 100 parts per million by volume on an hourly rolling average (40 CFR Part 266.102[e][6][i][B]).

- VI.F.1.g The hourly rolling average concentration, as defined in 40 CFR Part 266.102(e)(6)(i)(B), of total hydrocarbons, monitored as specified in Condition VI.H of this Permit, shall not exceed 20 ppmv, corrected to seven percent oxygen on a dry basis.

#### VI.F.2 Records

- VI.F.2.a *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall record, in the operating record for this Permit, all occasions on which waste is fed to the cement kiln and the operating limits specified in this Permit are exceeded.

- VI.F.2.b The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

#### VI.G AUTOMATIC WASTE FEED CUT-OFF

##### VI.G.1 Requirements

- VI.G.1.a The Permittee shall operate the systems specified in Attachment VI-D to this Permit to automatically cutoff the hazardous waste feed when the monitored operating conditions deviate from the set points specified therein.

Waste feed may not restart until the parameter(s) that caused the automatic waste feed cut-off are restored to permit limits, and all other parameters are within permit limits.

- VI.G.1.b Exhaust gases must be vented to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber.

**VI.G.1.c** Operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the Regional Administrator will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.

**VI.G.1.d** *Note: The Permit Writer may also choose to limit the number of AWFCOs.*

In the event of a malfunction of the automatic waste feed cut-off system, the Permittee shall immediately and manually cutoff and/or lockout the waste feed, in accordance with the procedures specified in Section [Insert section number] \_\_\_\_\_ of the RCRA Part B Permit Application, dated [Insert date of application] \_\_\_\_\_.

#### **VI.G.2 Records**

**VI.G.2.a** *Note: Electronic records of the following may be maintained, in lieu of paper copies, in accordance with Condition I.E.10.d of this Permit.*

The Permittee shall record, in the operating record for this Permit, the date and time of all automatic waste feed cut-off events. The records shall also include the known or suspected cause of the automatic waste feed cut-off, the triggering parameters, the corrective actions taken, the duration of the event, and the date and time of waste feed restart following the automatic waste feed cut-off.

**VI.G.2.b** The Permittee shall record, in the operating record for this Permit, all failures of the automatic waste feed cut-off system, including the date and time of the failure, a description of the failure, root cause of the failure, and corrective actions taken.

**VI.G.2.c** The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times at [Insert location and address] \_\_\_\_\_ for inspection by EPA, the State, or Local agencies.

#### **VI.H REPORTS**

In addition to the reporting requirements specified in Permit Condition II.M of this Permit, the Permittee shall comply with the following requirements:

#### VI.H.1 Quarterly Reports

The Permittee shall submit, to the Regional Administrator, a quarterly report that describes all automatic waste feed cut-offs that occurred during the reporting period. This report shall include the triggering parameter, duration, root cause, and corrective action taken for each automatic waste feed cut-off event.

The Permittee shall submit an Automatic Waste Feed Cutoff Report every 90 days to the Regional Administrator for a total of four reports per 365 day period. The Permittee shall report the number of AWFCOs that occurred during the reporting period, the value of the Group A parameter that caused each AWFCO, the duration of each AWFCO, the reason the Group A operating limit was exceeded, and the corrective action taken by the Permittee. The first 90 day period shall begin on the anniversary of the effective date of this permit and the last reporting period shall end at 2400 hours on the anniversary of the day preceding the effective date of this permit. The first ninety day AWFCO report is due within 120 days of the anniversary of the effective date of this permit. The second AWFCO report is due within 210 days of the anniversary of the effective date of this permit. The third AWFCO report is due within 300 days of the anniversary of the effective date of this permit. The fourth ninety day AWFCO report shall be due within 30 days of the anniversary of the effective date of this Permit. Ninety day process reports shall be submitted throughout the effective term of this permit.

These reports shall be included in the operating record for this Permit and shall be available at all times at *[Insert location and address of facility]* \_\_\_\_\_ for inspection by EPA, the State, or Local agencies; and during normal business hours at *[Insert location and address of information repository]* \_\_\_\_\_ for public review.

#### VI.H.2 Trial Burn Failure

If the Permittee determines—on the basis of the analytical results of the trial burn and before submitting the trial burn results—that the cement kiln failed to achieve any of the performance standards specified in 40 CFR Parts 266.104 through 266.107, the Permittee shall notify the Regional Administrator within 24 hours of making the determination.

Upon the request of the Regional Administrator, the Permittee shall modify or restrict facility operations or cease feeding hazardous waste to the cement kiln to address a trial burn failure.

#### VI.I. DIRECT TRANSFER OF HAZARDOUS WASTE

*Note: This Condition is applicable only if the Permittee is proposing to directly transfer hazardous waste from a transport vehicle to the cement kiln. If the Permittee is going to*

*conduct direct transfer operations, then this Condition of the Permit should reflect all of the requirements of 40 CFR Part 266.111.*

**If hazardous waste is directly transferred from a transport vehicle to a cement kiln without the use of a storage unit, the owner and operator must comply with 40 CFR Part 266.111.**

#### **VI.J. REGULATION OF RESIDUES**

*The Permittee must describe in the Part B permit application detailed procedures for managing kiln dust generated while burning hazardous waste. The Permittee may compare kiln dust generated while burning hazardous waste to kiln dust generated when not burning hazardous waste, or the Permittee may compare the kiln dust to health-based limits included in 40 CFR Part 266, Appendix VII. In either case, this Permit condition must reflect all of the applicable requirements of 40 CFR Part 266.112.*

**The Permittee shall regulate their residues in accordance with 40 CFR Part 266.112.**



## MODULE VII—SPECIFIC OPERATING CONDITIONS

*Note: For facilities with more than one cement kiln, a separate module should be prepared for each unit. Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

This module covers the operation of the [Insert unit name] \_\_\_\_\_ cement kiln at the [Insert facility name] \_\_\_\_\_ in [Insert location and address] \_\_\_\_\_ under final permit conditions. This cement kiln is a [Insert type and model] \_\_\_\_\_ unit manufactured by [Insert manufacturer's name and installation date] \_\_\_\_\_ rated for the production of [Insert quantity] \_\_\_\_\_ tons per hour clinker. The unit burns [List waste types].

### VII.A SHAKEDOWN

*This Condition applies only to new cement kilns. The following requirements may be omitted for existing cement kilns operating under interim status.*

During the shakedown phase, the Permittee shall comply with the conditions specified in this Condition of the Permit. The Permittee shall—at all times—operate the unit to minimize the possibility of a fire, explosion, or any unplanned sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

#### VII.A.1 Permitted and Prohibited Wastes

*In this Condition, the Permit Writer imposes limitations on the waste feed to the cement kiln to ensure compliance with the performance standards of 40 CFR Part 266.102. The Permit Writer should specify the complete set of criteria that establish limitations on the general physical and chemical characteristics of the waste feed to the cement kiln. It is crucial the Permit Writer knows and the Permit ensures that the wastes burned in the unit are within the criteria for which compliance has been demonstrated. Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

VII.A.1.a The Permittee may burn, in the cement kiln, only the hazardous wastes listed in Attachment [Insert Attachment number] \_\_\_\_\_ of this Permit.

#### Hazardous Waste No.

[List EPA Waste Codes]

#### Description

[Provide a general physical and chemical description of the waste streams, including the common name,

*source of generation, physical state, and hazardous properties.]*

**VII.A.1.b** *Note: Unless the Permittee has notified the Regional Administrator of the intent to burn dioxin-like wastes, this list begins with the dioxin-like wastes (F020, F021, F022, F023, F026, and F027). The Permit Writer may augment this list with other waste types to ensure compliance with the applicable operating requirements and performance standards.*

**Burning, in the cement kiln, of the wastes listed in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit is prohibited [List the prohibited wastes]. These wastes include the following:**

- VII.A.1.b.1** Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR Part 261.31
- VII.A.1.b.2** Polychlorinated biphenyl (PCB) waste, as defined in 40 CFR Part 761.3
- VII.A.1.b.3** Radioactive or nuclear waste material
- VII.A.1.b.4** Explosive material, as defined by the Department of Transportation under 49 CFR Part 173
- VII.A.1.b.5** Containerized gases
- VII.A.1.b.6** Municipal garbage
- VII.A.1.b.7** Infectious wastes
- VII.A.1.b.8** Medical wastes
- VII.A.1.b.9** Wastes displaying the Characteristic of Reactivity as defined at 40 CFR Part 261.23
- VII.A.1.b.10** Wastes that are not pumpable
- VII.A.1.b.11** Any waste which does not meet the requirements of 40 CFR Part 266.100. (This subsection is particularly focussed on the dilution prohibition with respect to heating value. See 40 CFR Part 266.100(c)(2)).

- VII.A.1.c Before burning any wastes not authorized under this permit, the Permittee shall receive approval for a permit modification as required under Condition I.B.1 of this Permit.
- VII.A.1.d During the shakedown phase, the Permittee shall burn only those wastes listed in Condition VII.A.1.a of this Permit (except the following wastes which are specifically excluded from being burned during the shakedown phase).
- [Insert list of prohibited wastes for shakedown phase]*
- VII.A.1.e The Permittee shall not burn hazardous waste that has a heating value of less than 5,000 British thermal units per pound (Btu/lb), as generated, unless the heating value of an original waste stream is decreased during treatment of the waste stream to reduce hazardous organic compound content. Blending is prohibited as a means of augmenting the heating value (40 CFR Part 268.3).
- VII.A.1.f The total ash feed rate shall be no greater than *[Insert limit]* \_\_\_\_\_.
- VII.A.1.g The combined chloride and chlorine content of the waste shall be no greater than *[Insert limit]* \_\_\_\_\_ percent by weight.
- VII.A.1.h The physical state of the waste shall be *[Insert state, for example, liquid]* \_\_\_\_\_.
- VII.A.1.i The viscosity of liquid waste feeds shall not exceed *[Insert limit]* \_\_\_\_\_ centipoise.
- VII.A.1.j *Note: The Permit Writer may determine the need for additional permit conditions regulating the maximum concentration (in milligrams per liter) of one or more metals in the waste feed for systems using a batch feed mechanism.*

Metals in the waste feed shall not exceed the following limits in grams per hour (g/hr):

- Antimony *[Insert limit]* \_\_\_\_\_ g/hr
- Arsenic *[insert limit]* \_\_\_\_\_ g/hr
- Barium *[Insert limit]* \_\_\_\_\_ g/hr
- Beryllium *[Insert limit]* \_\_\_\_\_ g/hr

- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.A.1.k The total suspended solids content of the waste feed shall not exceed [*Insert maximum value*] \_\_\_\_\_ percent by weight.

#### VII.A.2 Process Operating Conditions

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

Hazardous waste must not be fed into the unit unless the device is operating within the conditions specified below (40 CFR Part 266.102[e][2][iii]).

##### VII.A.2.a Group A Parameter Limits

*For a list of control parameters, the Permit Writer is referred to Section 6.2 of Component 7 of the training manual.*

VII.A.2.a.1 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ combustion chamber temperature, monitored as specified in Condition VI.D of this Permit, shall be maintained at [*Insert minimum value*] \_\_\_\_\_ °F to [*Insert maximum value*] \_\_\_\_\_ °F.

VII.A.2.a.2 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ combustion gas velocity, monitored as specified in

Condition VI.D of this Permit, shall be no greater than [Insert maximum value] \_\_\_\_\_ feet per second.

VII.A.2.a.3 When ever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ the concentration of carbon monoxide in the stack gas shall be no greater than [Insert maximum value] \_\_\_\_\_ parts per million by volume, corrected to 7 percent oxygen.

VII.A.2.a.4 *Note: During shakedown, the feed rate is normally limited to the anticipated final permit limits, although the Permit Writer may impose more stringent limits (that is, 50 to 80 percent of the anticipated final limits). Refer to Component 7, Section 1.3 of the training manual.*

The total [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ feed rate of hazardous waste to the cement kiln, monitored as specified in Condition VI.D of this Permit, shall be no greater than [Insert maximum value] \_\_\_\_\_ pounds per hour.

VII.A.2.a.5 The [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ feed rate of pumpable hazardous waste to the cement kiln monitored as specified in Condition VI.D of this Permit, shall be no greater than [Insert maximum value] \_\_\_\_\_ pounds per hour.

VII.A.2.a.6 Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ clinker production rate shall be at least [Insert minimum value] \_\_\_\_\_ tons per hour not to exceed [Insert maximum value] \_\_\_\_\_ tons per hour.

*Note: Conditions VII.A.2.a.7 and VII.A.2.a.8 of this Permit apply to an electrostatic precipitator (ESP) or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. These limits are developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, these conditions should be omitted or replaced with other appropriate limits.*

VII.A.2.a.7 Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ off-gas inlet temperature to the ESP, monitored as specified in Condition VI.D of this Permit, shall not exceed [Insert maximum value] \_\_\_\_\_ °F.

VII.A.2.a.8 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ voltage supplied to the ESP, monitored as specified in Condition VI.D of this Permit, shall be greater than [*Insert minimum value*] \_\_\_\_\_ kilovolt Amperes.

VII.A.2.b Group B Parameter Limits

VII.A.2.b.1 *Note: In lieu of meeting this requirement, the Permit Writer may allow a facility to conduct routine ambient monitoring for fugitive emissions.*

Whenever hazardous waste is in the unit, the Permittee shall control fugitive emissions from the combustion zone by maintaining the combustion chamber under a vacuum of no less than [*Insert minimum value*] \_\_\_\_\_ inches of water column, measured on an instantaneous basis.

VII.A.2.b.2 Whenever hazardous waste is in the unit, the dry raw material mix feed rate, monitored as specified in Condition VI.H of this Permit, shall not exceed [*Insert maximum feed rate*] \_\_\_\_\_ tons per hour or fall below [*Insert minimum feed rate*] \_\_\_\_\_ tons per hour on an [*Insert either hourly rolling average or instantaneous*] \_\_\_\_\_ basis, as defined in 40 CFR Part 266.102(e)(6)(I)(B).

VII.A.2.b.3 Whenever hazardous waste is in the unit, the Permittee shall maintain the rotational speed of the kiln at no less than [*Insert minimum value*] \_\_\_\_\_ rotations per minute, measured on an instantaneous basis.

VII.A.2.b.4 The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rates of metals in all feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr

- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.A.2.b.5 The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rates of metals in all pumpable hazardous waste feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr



- Others [*Insert limit*] \_\_\_\_\_ g/hr

**VII.A.2.b.6**    The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rates of metals in all hazardous waste feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

*Note: Condition VII.A.2.b.7 of this Permit applies to an ESP or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. This limit is developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, this Condition should be omitted or replaced with additional appropriate permit limits.*

**VII.A.2.b.7**    The flow rate of off-gas through the ESP shall not exceed [*Insert maximum value*] \_\_\_\_\_ acfm, measured on an hourly rolling average basis.

**VII.A.2.c**      Group C Parameter Limits

- VII.A.2.c.1 The instantaneous atomizing fluid pressure for the hazardous waste feed shall be no less than [Insert minimum value] \_\_\_\_\_ psig.
- VII.A.2.c.2 The burner turndown ratio for the hazardous waste feed shall be no greater than [Insert maximum value] \_\_\_\_\_.
- VII.A.2.c.3 Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ excess oxygen level in the combustion chamber, monitored as specified in Condition VI.D of this Permit, shall be no less than [Insert minimum value] \_\_\_\_\_ percent on a dry basis.
- VII.A.2.c.4 The [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ total heat input to the cement kiln from all feed streams shall not exceed [Insert maximum value] \_\_\_\_\_ Btus per hour.

**VII.A.3 Duration of Shakedown**

*Note: The duration of the first shakedown phase cannot exceed 720 hours. The Permittee may petition EPA for a single extension of no more than 720 hours of the shakedown phase.*

The shakedown phase shall not exceed 720 hours of operation whenever hazardous waste is in the unit.

**VII.A.4 Reports**

The Permittee shall comply with all the reporting requirements of Module VI, including Condition VI.H of this Permit.

**VII.B TRIAL BURN**

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

At the conclusion of the shakedown phase and at mid-term intervals of no less than 5 years following the issuance of this Permit, the Permittee shall conduct trial burns. The Permittee shall comply with the conditions specified in the following Conditions, related to these trial burns, except that the Regional Administrator may waive the requirements related to risk assessment for the mid-term trial burns.

**VII.B.1 Trial Burn Plan Submittal**

At least 6 months before conducting the trial burn, the Permittee shall revise and resubmit the trial burn plan to the Regional Administrator for approval. The revised trial burn plan must include all applicable EPA-approved test methods and procedures in effect at the time of the re-submittal. The trial burn test must be designed to collect all data needed to (1) ensure conformance to the performance standards of 40 CFR Parts 266.104 through 266.107, (2) establish operating conditions required under 40 CFR Part 266.102(e), and (3) perform the multi pathway risk assessment required under Condition VII.B.6 of this Permit.

**VII.B.2 Conformity to the Trial Burn Plan**

During the trial burn phase, the Permittee shall operate and monitor the cement kiln and air pollution control system as specified in the approved trial burn plan.

**VII.B.3 Trial Burn POHCs**

The trial burn POHCs for which DREs must be determined are as follows:

*[List POHCs]*

**VII.B.4 Trial Burn Determinations**

*Note: The Permit Writer may augment the list of determinations in 40 CFR Part 270.66(f) with others, as needed to ensure conformance to the performance standards of 40 CFR Parts 266.104 through 107 and to establish the operating conditions required under 40 CFR Part 266.102(e).*

During the trial burn, or as soon after the trial burn as practicable, the Permittee shall make the determinations required under 40 CFR Part 270.66(f).

**VII.B.5 Submittals and Certifications of Trial Burn Data**

*Note: The Regional Administrator may approve longer time periods for submittal of trial burn submittals if good cause is established.*

The Permittee shall submit, to the Regional Administrator, a certification that the trial burn has been carried out in accordance with the approved trial burn plan, a copy of all data collected during the trial burn, and the results of the determinations required under Condition VII.B.4 of this Permit within 90 days of the completion of the trial burn. All submittals must be certified in accordance with 40 CFR Part 270.66(d)(6).

**VII.B.6 Risk Assessment Requirements**

*Note: The requirements for risk assessment apply only to those facilities where the operator, and not the regulatory agency, is responsible for conducting the risk assessment. Additional language may be added by the Permit Writer to ensure that the operation of the cement kiln is protective of human health and the environment.*

- VII.B.6.a** At least 6 months before conducting the trial burn, the Permittee shall submit, to the Regional Administrator for approval, a work plan for a multi pathway human health and ecological risk assessment. The work plan must conform to all applicable EPA-approved risk protocols in effect at the time of the submittal.
- VII.B.6.b** Within 150 days of the completion of the trial burn, the Permittee shall submit, to the Regional Administrator, the results of the risk assessment, performed in accordance with the approved work plan.

#### **VII.C POST-TRIAL BURN**

During the post-trial burn phase (following the completion of the trial burn but before the final operating limits are established), the Permittee shall comply with the conditions specified in this Condition of the Permit. The Permittee shall—at all times—operate the unit to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

##### **VII.C.1 Permitted and Prohibited Wastes**

*In this Condition, the Permit Writer imposes limitations on the waste feed to the cement kiln to ensure compliance with the performance standards of 40 CFR Part 266.102. The Permit Writer should specify the complete set of criteria that establish limitations on the general physical and chemical characteristics of the waste feed to the cement kiln.*

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

- VII.C.1.a** The Permittee shall burn only those permitted wastes listed in Condition VII.A.1 of this Permit.
- VII.C.1.b** The Permittee shall not burn hazardous waste that has a heating value of less than 5,000 British thermal units per pound (Btu/lb), as generated, unless the heating value of an original waste stream is decreased during treatment of the waste stream to reduce hazardous organic compound content. Blending is prohibited as a means of augmenting the heating value (40 CFR Part 268.3).

- VII.C.1.c The total ash feed rate shall be no greater than [insert limit].
- VII.C.1.d The combined chloride and chlorine content of the hazardous waste shall be no greater than [Insert limit] \_\_\_\_\_ percent by weight.
- VII.C.1.e The physical state of the hazardous waste shall be [Insert state, for example, liquid or solid] \_\_\_\_\_.
- VII.C.1.f The viscosity of liquid hazardous waste feeds shall not exceed [Insert limit] \_\_\_\_\_ centipoise.
- VII.C.1.g *Note: The Permit Writer may determine the need for additional permit conditions regulating the maximum concentration (in milligrams per liter) of one or more metals in the waste feed for systems using a batch feed mechanism.*

Metals in the hazardous waste feed shall not exceed the following limits:

- Antimony [Insert limit] \_\_\_\_\_ g/hr
- Arsenic [Insert limit] \_\_\_\_\_  
g/hr
- Barium [Insert limit] \_\_\_\_\_ g/hr
- Beryllium [Insert limit] \_\_\_\_\_ g/hr
- Cadmium [Insert limit] \_\_\_\_\_ g/hr
- Chromium [Insert limit] \_\_\_\_\_ g/hr
- Lead [Insert limit] \_\_\_\_\_ g/hr
- Mercury [Insert limit] \_\_\_\_\_ g/hr
- Nickel [Insert limit] \_\_\_\_\_  
g/hr
- Silver [Insert limit] \_\_\_\_\_  
g/hr

- Selenium [Insert limit] \_\_\_\_\_ g/hr
- Thallium [Insert limit] \_\_\_\_\_ g/hr
- Others [Insert limit] \_\_\_\_\_ g/hr

**VII.C.1.h** The total suspended solids content of the hazardous waste feed shall not exceed [Insert maximum value] \_\_\_\_\_ percent by weight.

## **VII.C.2 Process Operating Conditions**

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

Hazardous waste must not be fed into the unit unless the device is operating within the conditions specified below (40 CFR Part 266.102[e][2][iii]).

### **VII.C.2.a Group A Parameter Limits**

*For a list of control parameters, the Permit Writer is referred to Section 6.2 of Component 7 of the training manual.*

- VII.C.2.a.1** Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ combustion chamber temperature, monitored as specified in Condition VI.D of this Permit, shall be maintained at [Insert minimum value] \_\_\_\_\_ °F to [Insert maximum value] \_\_\_\_\_ °F.
- VII.C.2.a.2** Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ combustion gas velocity, monitored as specified in Condition VI.D of this Permit, shall be no greater than [Insert maximum value] \_\_\_\_\_ feet per second.
- VII.C.2.a.3** Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ the concentration of carbon monoxide in the stack gas shall be no greater than [Insert maximum value] \_\_\_\_\_ parts per million by volume, corrected to 7 percent oxygen.
- VII.C.2.a.4** *Note: During the post-trial burn phase, the feed rate is normally limited to 50 to 80 percent of the anticipated final permit limits, although the Permit Writer may impose even*

*more stringent limits or permit operations at the anticipated final limits. Refer to Component 7, Section 1.3 of the training manual.*

The total [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rate of hazardous waste to the cement kiln, monitored as specified in Condition VI.D of this Permit, shall be no greater than [*Insert maximum value*] \_\_\_\_\_ pounds per hour.

VII.C.2.a.5 The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rate of pumpable hazardous waste to the cement kiln monitored as specified in Condition VI.D of this Permit, shall be no greater than [*Insert maximum value*] \_\_\_\_\_ pounds per hour.

VII.C.2.a.6 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ clinker production rate shall be at least [*Insert minimum value*] \_\_\_\_\_ tons per hour not to exceed [*Insert maximum value*] \_\_\_\_\_ tons per hour.

*Note: Conditions VII.C.2.a.7 and VII.C.2.a.8 of this Permit apply to an electrostatic precipitator (ESP) or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. These limits are developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, these conditions should be omitted or replaced with other appropriate limits.*

VII.C.2.a.7 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ off-gas inlet temperature to the ESP, monitored as specified in Condition VI.D of this Permit, shall not exceed [*Insert maximum value*] \_\_\_\_\_ °F.

VII.C.2.a.8 Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ voltage supplied to the ESP, monitored as specified in Condition VI.D of this Permit, shall be greater than [*Insert minimum value*] \_\_\_\_\_ kilovolt Amperes.

VII.C.2.b Group B Parameter Limits



- VII.C.2.b.1 *Note: In lieu of meeting this requirement, the Permit Writer may allow a facility to conduct routine ambient monitoring for fugitive emissions.*

Whenever hazardous waste is in the unit, the Permittee shall control fugitive emissions from the combustion zone by maintaining the combustion chamber under a vacuum of no less than *[Insert minimum value]* \_\_\_\_\_ inches of water column, measured on an instantaneous basis.

- VII.C.2.b.2 Whenever hazardous waste is in the unit, the dry raw material mix feed rate, monitored as specified in Condition VI.H of this Permit, shall not exceed *[Insert maximum feed rate]* \_\_\_\_\_ tons per hour or fall below *[Insert minimum feed rate]* \_\_\_\_\_ tons per hour on an *[Insert either hourly rolling average or instantaneous]* \_\_\_\_\_ basis, as defined in 40 CFR Part 266.102(e)(6)(I)(B).

- VII.C.2.b.3 Whenever hazardous waste is in the unit, the Permittee shall maintain the rotational speed of the kiln at no less than *[Insert minimum value]* \_\_\_\_\_ rotations per minute, measured on an instantaneous basis.

- VII.C.2.b.4 The *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ feed rates of metals in all feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony *[Insert limit]* \_\_\_\_\_ g/hr
- Arsenic *[Insert limit]* \_\_\_\_\_ g/hr
- Barium *[Insert limit]* \_\_\_\_\_ g/hr
- Beryllium *[Insert limit]* \_\_\_\_\_ g/hr
- Cadmium *[Insert limit]* \_\_\_\_\_ g/hr
- Chromium *[Insert limit]* \_\_\_\_\_ g/hr
- Lead *[Insert limit]* \_\_\_\_\_ g/hr
- Mercury *[Insert limit]* \_\_\_\_\_ g/hr

- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.C.2.b.5 The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rates of metals in all pumpable hazardous waste feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.C.2.b.6 The [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ feed rates of metals in all hazardous waste feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

*Note: Condition VII.C.2.b.7 of this Permit applies to an ESP or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. This limit is developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, this Condition should be omitted or replaced with additional appropriate permit limits.*

**VII.C.2.b.7**      The flow rate of off-gas through the ESP shall not exceed [*Insert maximum value*] \_\_\_\_\_ acfm, measured on an hourly rolling average basis.

**VII.C.2.c      Group C Parameter Limits**

**VII.C.2.c.1**      The instantaneous atomizing fluid pressure for the hazardous waste feed shall be no less than [*Insert minimum value*] \_\_\_\_\_ psig.

- VII.C.2.c.2 The burner turndown ratio for the hazardous waste feed shall be no greater than *[Insert maximum value]* \_\_\_\_\_.
- VII.C.2.c.3 Whenever hazardous waste is in the unit, the *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ excess oxygen level in the combustion chamber, monitored as specified in Condition VI.D of this Permit, shall be no less than *[Insert minimum value]* \_\_\_\_\_ percent on a dry basis.
- VII.C.2.c.4 The *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ total heat input to the cement kiln from all feed streams shall not exceed *[Insert maximum value]* \_\_\_\_\_ Btus per hour.

### VII.C.3 Reports

The Permittee shall comply with all the reporting requirements of Module VI, including Condition VI.H of this Permit.

## VII.D FINAL OPERATING CONDITIONS

Following the establishment of final operating conditions based on the results of (1) the trial burn test and (2) the site-specific risk assessment, the Permittee shall comply with the conditions specified in this Condition of the Permit. The Permittee shall—at all times—operate the unit to minimize the possibility of a fire, explosion, or any unplanned sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

### VII.D.1 Permitted and Prohibited Wastes

*In this Condition, the Permit Writer imposes limitations on the waste feed to the cement kiln to ensure compliance with the performance standards of 40 CFR Part 266.102. The Permit Writer should specify the complete set of criteria that establish limitations on the general physical and chemical characteristics of the waste feed to the cement kiln.*

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

- VII.D.1.a The Permittee may burn, in the cement kiln, only the hazardous wastes listed in the following Attachment.

<u>Hazardous Waste No.</u>	<u>Description</u>
----------------------------	--------------------

[List EPA Waste Codes]

[Provide a general physical and chemical description of the waste streams, including the common name, source of generation, physical state, and hazardous properties.]

**VII.D.1.b** *Note: In order for a unit to be allowed to treat any of the prohibited wastes identified in Condition VII.A.1 of this Permit, the facility must successfully demonstrate the ability to meet the performance standards specified in Condition VI.F of this Permit during the trial burn test while treating these wastes.*

Burning, in the cement kiln, of the wastes listed in Attachment [Insert Attachment letter] \_\_\_\_\_ of this Permit is prohibited [List the prohibited wastes]. These wastes include the following:

- VII.D.1.b.1** Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR Part 261.31
- VII.D.1.b.2** Polychlorinated biphenyl (PCB) waste, as defined in 40 CFR Part 761.3
- VII.D.1.b.3** Radioactive or nuclear waste material
- VII.D.1.b.4** Explosive material, as defined by the Department of Transportation under 49 CFR Part 173
- VII.D.1.b.5** Containerized gases
- VII.D.1.b.6** Municipal garbage
- VII.D.1.b.7** Infectious wastes
- VII.D.1.b.8** Medical wastes
- VII.D.1.b.9** Wastes displaying the Characteristic of Reactivity as defined at 40 CFR Part 261.23
- VII.D.1.b.10** Wastes that are not pumpable
- VII.D.1.b.11** Any waste which does not meet the requirements of 40 CFR Part 266.100. (This subsection is particularly focussed on the dilution prohibition with respect to heating value. See 40 CFR Part 266.100(c)(2)).

- VII.D.1.c Before burning any wastes not authorized under this Permit, the Permittee shall obtain approval for a modification to the permit as required under Condition I.B.1 of this Permit.
- VII.D.1.d The Permittee shall not burn hazardous waste that has a heating value of less than 5,000 British thermal units per pound (Btu/lb), as generated, unless the heating value of an original waste stream is decreased during treatment of the waste stream to reduce hazardous organic compound content. Blending is prohibited as a means of augmenting the heating value (40 CFR Part 268.3).
- VII.D.1.e The total ash feed rate shall be no greater than *[Insert limit]* \_\_\_\_\_.
- VII.D.1.f The combined chloride and chlorine content of the waste shall be no greater than *[Insert limit]* \_\_\_\_\_ percent by weight.
- VII.D.1.g The physical state of the waste shall be *[Insert state, for example, liquid]* \_\_\_\_\_.
- VII.D.1.h The viscosity of liquid waste feeds shall not exceed *[Insert limit]* \_\_\_\_\_ centipoise.
- VII.D.1.i *Note: The Permit Writer may determine the need for additional permit conditions regulating the maximum concentration (in milligrams per liter) of one or more metals in the waste feed for systems using a batch feed mechanism.*

Metals in the waste feed shall not exceed the following limits:

- Antimony *[Insert limit]* \_\_\_\_\_ g/hr
- Arsenic *[insert limit]* \_\_\_\_\_ g/hr
- Barium *[Insert limit]* \_\_\_\_\_ g/hr
- Beryllium *[Insert limit]* \_\_\_\_\_ g/hr
- Cadmium *[Insert limit]* \_\_\_\_\_ g/hr
- Chromium *[Insert limit]* \_\_\_\_\_ g/hr
- Lead *[Insert limit]* \_\_\_\_\_ g/hr
- Mercury *[Insert limit]* \_\_\_\_\_ g/hr

- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.D.1.j The total suspended solids content of the waste feed shall not exceed [*Insert maximum value*] \_\_\_\_\_ percent by weight.

## VII.D.2 Process Operating Conditions

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the necessary performance standards are met and that the operation of the cement kiln is protective of human health and the environment.*

Hazardous waste must not be fed into the unit unless the device is operating within the conditions specified below (40 CFR Part 266.102[e][2][iii]).

### VII.D.2.a Group A Parameter Limits

The Permittee shall maintain the cement kiln and air pollution control equipment in such a manner that, when operating in accordance with the waste feed limitations and operating requirements specified in this Permit, they will meet the performance standards described in the following Conditions.

VII.D.2.a.1 The cement kiln shall achieve a DRE of 99.99 percent for each of the following POHCs:

[*Insert POHC 1*]

[*Insert POHC 2*]

The DRE shall be determined by using the method specified in 40 CFR Part 266.104(a).

VII.D.2.a.2 The emissions of hydrogen chloride and chlorine shall be no greater than [*Insert limit*] \_\_\_\_\_ and [*Insert limit*] \_\_\_\_\_ pounds per hour, respectively.

VII.D.2.a.3 *Note: This Condition is omitted if the cement kiln qualifies for a waiver of the DRE standard and the Permittee*



*complies with Tier I or adjusted Tier I metals feed rate screening limits (40 CFR Part 266.109[b]).*

The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected to 7 percent by volume of oxygen, in accordance with the formula specified in 40 CFR Part 266.105(a).

- VII.D.2.a.4 The emissions of PCDDs and PCDFs shall not exceed *[Insert risk-based emissions limit]* \_\_\_\_\_.
- VII.D.2.a.5 Whenever hazardous waste is in the unit, the *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ combustion chamber temperature, monitored as specified in Condition VI.D of this Permit, shall be maintained at *[Insert minimum value]* \_\_\_\_\_ °F to *[Insert maximum value]* \_\_\_\_\_ °F.
- VII.D.2.a.6 Whenever hazardous waste is in the unit, the *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ combustion gas velocity, monitored as specified in Condition VI.D of this Permit, shall be no greater than *[Insert maximum value]* \_\_\_\_\_ feet per second.
- VII.D.2.a.7 *Note: An alternative carbon monoxide limit above 100 ppmv may be permitted if the stack gas concentrations of hydrocarbons do not exceed 20 ppmv.*
- Whenever hazardous waste is in the unit, the *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ the concentration of carbon monoxide in the stack gas shall be no greater than *[Insert maximum value]* \_\_\_\_\_ parts per million by volume, corrected to 7 percent oxygen.
- VII.D.2.a.8 The total *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ feed rate of hazardous waste to the cement kiln, monitored as specified in Condition VI.D of this Permit, shall be no greater than *[Insert maximum value]* \_\_\_\_\_ pounds per hour.
- VII.D.2.a.9 The *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ feed rate of pumpable hazardous waste to the cement kiln monitored as specified in Condition VI.D of this Permit, shall be no greater than *[Insert maximum value]* \_\_\_\_\_ pounds per hour.

- VII.D.2.a.10** Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ clinker production rate shall be at least [*Insert minimum value*] \_\_\_\_\_ tons per hour not to exceed [*Insert maximum value*] \_\_\_\_\_ tons per hour.

*Note: Conditions VII.D.2.a.11 and VII.D.2.a.12 of this Permit apply to an electrostatic precipitator (ESP) or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. These limits are developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, these conditions should be omitted or replaced with other appropriate limits.*

- VII.D.2.a.11** Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ off-gas inlet temperature to the ESP, monitored as specified in Condition VI.D of this Permit, shall not exceed [*Insert maximum value*] \_\_\_\_\_ °F.

- VII.D.2.a.12** Whenever hazardous waste is in the unit, the [*Insert either instantaneous or hourly rolling average*] \_\_\_\_\_ voltage supplied to the ESP, monitored as specified in Condition VI.D of this Permit, shall be greater than [*Insert minimum value*] \_\_\_\_\_ kilovolt Amperes.

**VII.D.2.b      Group B Parameter Limits**

- VII.D.2.b.1** *Note: In lieu of meeting this requirement, the Permit Writer may allow a facility to conduct routine ambient monitoring for fugitive emissions.*

Whenever hazardous waste is in the unit, the Permittee shall control fugitive emissions from the combustion zone by maintaining the combustion chamber under a vacuum of no less than [*Insert minimum value*] \_\_\_\_\_ inches of water column, measured on an instantaneous basis.

- VII.D.2.b.2** Whenever hazardous waste is in the unit, the dry raw material mix feed rate, monitored as specified in Condition VI.H of this Permit, shall not exceed [*Insert maximum feed rate*] \_\_\_\_\_ tons per hour or fall below [*Insert minimum feed rate*] \_\_\_\_\_ tons per hour on an [*Insert either hourly rolling average or instantaneous*] \_\_\_\_\_ basis, as defined in 40 CFR Part 266.102(e)(6)(I)(B).

VII.D.2.b.3 Whenever hazardous waste is in the unit, the Permittee shall maintain the rotational speed of the kiln at no less than *[Insert minimum value]* \_\_\_\_\_ rotations per minute, measured on an instantaneous basis.

VII.D.2.b.4 Metals emissions shall not exceed the following:

- Antimony *[Insert limit]* \_\_\_\_\_ g/hr
- Arsenic *[Insert limit]* \_\_\_\_\_ g/hr
- Barium *[Insert limit]* \_\_\_\_\_ g/hr
- Beryllium *[Insert limit]* \_\_\_\_\_ g/hr
- Cadmium *[Insert limit]* \_\_\_\_\_ g/hr
- Chromium *[Insert limit]* \_\_\_\_\_ g/hr
- Lead *[Insert limit]* \_\_\_\_\_ g/hr
- Mercury *[Insert limit]* \_\_\_\_\_ g/hr
- Nickel *[Insert limit]* \_\_\_\_\_ g/hr
- Silver *[Insert limit]* \_\_\_\_\_ g/hr
- Selenium *[Insert limit]* \_\_\_\_\_ g/hr
- Thallium *[Insert limit]* \_\_\_\_\_ g/hr
- Others *[Insert limit]* \_\_\_\_\_ g/hr

VII.D.2.b.5 The *[Insert either instantaneous or hourly rolling average]* \_\_\_\_\_ feed rates of metals in all feed streams to the cement kiln's combustion chamber shall not exceed the following limits:

- Antimony *[Insert limit]* \_\_\_\_\_ g/hr
- Arsenic *[Insert limit]* \_\_\_\_\_ g/hr
- Barium *[Insert limit]* \_\_\_\_\_ g/hr
- Beryllium *[Insert limit]* \_\_\_\_\_ g/hr

- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_  
g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

VII.D.2.b.6 The [*Insert either instantaneous or hourly rolling average*]  
\_\_\_\_\_ feed rates of metals in all pumpable hazardous  
waste feed streams to the cement kiln's combustion  
chamber shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr

- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

**VII.D.2.b.7**    The [*Insert either instantaneous or hourly rolling average*]  
\_\_\_\_\_ feed rates of metals in all hazardous waste  
feed streams to the cement kiln's combustion chamber  
shall not exceed the following limits:

- Antimony [*Insert limit*] \_\_\_\_\_ g/hr
- Arsenic [*Insert limit*] \_\_\_\_\_ g/hr
- Barium [*Insert limit*] \_\_\_\_\_ g/hr
- Beryllium [*Insert limit*] \_\_\_\_\_ g/hr
- Cadmium [*Insert limit*] \_\_\_\_\_ g/hr
- Chromium [*Insert limit*] \_\_\_\_\_ g/hr
- Lead [*Insert limit*] \_\_\_\_\_ g/hr
- Mercury [*Insert limit*] \_\_\_\_\_ g/hr
- Nickel [*Insert limit*] \_\_\_\_\_ g/hr
- Silver [*Insert limit*] \_\_\_\_\_ g/hr
- Selenium [*Insert limit*] \_\_\_\_\_ g/hr
- Thallium [*Insert limit*] \_\_\_\_\_ g/hr
- Others [*Insert limit*] \_\_\_\_\_ g/hr

*Note: Condition VII.D.2.b.8 of this Permit applies to an ESP or other dry particulate matter control system that is used to remove particulate matter from the combustion process off-gases. This limit is developed during the DRE test. If the cement kiln is not equipped with an ESP or other dry particulate matter control system, this Condition should be omitted or replaced with additional appropriate permit limits.*

VII.D.2.b.8 The flow rate of off-gas through the ESP shall not exceed [Insert maximum value] \_\_\_\_\_ acfm, measured on an hourly rolling average basis.

**VII.D.2.c Group C Parameter Limits**

VII.D.2.c.1 The instantaneous atomizing fluid pressure for the hazardous waste feed shall be no less than [Insert minimum value] \_\_\_\_\_ psig.

VII.D.2.c.2 The burner turndown ratio for the hazardous waste feed shall be no greater than [Insert maximum value] \_\_\_\_\_.

VII.D.2.c.3 Whenever hazardous waste is in the unit, the [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ excess oxygen level in the combustion chamber, monitored as specified in Condition VI.D of this Permit, shall be no less than [Insert minimum value] \_\_\_\_\_ percent on a dry basis.

VII.D.2.c.4 The [Insert either instantaneous or hourly rolling average] \_\_\_\_\_ total heat input to the cement kiln from all feed streams shall not exceed [Insert maximum value] \_\_\_\_\_ Btus per hour.

**VII.D.3 Risk Related Conditions**

*Note: Throughout this Condition, additional language may be added by the Permit Writer to ensure that the operation of the cement kiln is protective of human health and the environment.*

**VII.D.3.a Land Use Changes**

The permittee shall implement land use changes as necessary to mitigate risk within [Insert number of days] \_\_\_\_\_ days of the effective date of this Permit. Specific land use changes the Permittee shall implement are specified below.

VII.D.3.a.1 The Permittee shall cease and desist from its practice of allowing livestock to graze on property encompassed within the Permittee's facility as defined by this permit.

VII.D.3.a.2 The Permittee shall cease and desist from its practice of allowing the taking of fish for purposes of consumption

from water bodies encompassed within the Permittee's facility as defined by this Permit.

**VII.D.3.b Environmental Monitoring**

**VII.D.3.b.1** *Note: The Permit Writer may include specific environmental monitoring requirements in the Permit at the time of issuance, as in the Ash Grove Cement case.*

Upon request of the Regional Administrator, the Permittee shall perform sampling and analysis of environmental media—including, but not limited to, soils, surface water, sediments, flora, and fauna—to verify or supplement the results of risk assessments performed under Condition VII of this Permit.

**VII.D.3.c Equipment Additions and Improvements**

*Note: The equipment described in the following sections is included as an example only. Equipment required under this section of the permit will be specified on a case-by-case basis.*

The Permittee shall add equipment and make such improvements as necessary to mitigate risk within [Insert number of days] \_\_\_\_\_ days of the effective date of this Permit. Specific equipment to be added and tested is specified as follows:

**VII.D.3.c.1** The Permittee shall construct and test a carbon adsorption system in accordance with the following conditions and schedules.

**VII.D.3.c.1.i** *Note: The Permit Writer may include relevant sections of the Part B permit application as attachments to the Permit in order to facilitate compliance inspections.*

The Permittee shall construct the carbon adsorption system in accordance with the engineering design plans and specifications to be prepared by a qualified registered professional engineer. The design plans shall be submitted to the Regional Administrator for review and approval within 90 days of the issuance of this permit. Construction of the carbon adsorption system shall be completed within 180 days of the issuance of this permit and prior to the start of the trial burn



test. The Permittee shall construct the unit to minimize the possibility of a fire, explosion, or any unplanned sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water that might threaten human health or the environment (40 CFR Part 264.31).

**VII.D.3.c.1.ii** The Permittee shall conduct all calibration and testing of its process control instrumentation prior to using the carbon adsorption system when hazardous waste is in the cement kiln. The Permittee shall submit a certification that all calibration and testing directed by this Permit has been completed.

**VII.D.3.c.1.iii** Before the Permittee may begin burning hazardous waste in the cement kiln, the following conditions must be met:

- Permittee submits, to the Regional Administrator—by certified mail or hand delivery—a letter, signed by the Permittee and an independent registered professional engineer, certifying that the carbon adsorption system has been constructed in compliance with the approved design plans and specifications.

**VII.D.3.c.1.iv** Regional Administrator either inspects the carbon adsorption unit and determines that they are in compliance with the conditions of the Permit; waives the inspection; or fails to notify the Permittee, within 30 calendar days of submittal, that the facility will be inspected.

**VII.D.3.c.1.v** Once construction is completed, the Permittee shall conduct a trial burn in accordance with Condition VII.B of this Permit, except that the Regional Administrator may waive the requirements related to risk assessment.

#### **VII.D.4 Reports**

In addition to the following, the Permittee shall comply with all the reporting requirements of Module VI, including Condition VI.H of this Permit.

- VII.D.4.a** *Note: The following permit condition requires a quarterly report to be prepared at the end of each calendar quarter. The Permit Writer may elect to specify a different reporting period or frequency (for example, every 180 days following the effective date of the permit).*

**Ninety Day Process Report**—The Permittee shall submit a quarterly process report to the Regional Administrator. These reports shall be submitted within 30 days following the end of each calendar quarter beginning with the end of the first calendar quarter following the effective date of this permit. The Permittee shall report the average waste feed rate, combustion chamber temperature, ESP inlet temperature, and stack gas velocity based on the data collected in the preceding quarter. The Permittee shall compare the ninety day report averages to the value of the annual average process conditions, assess whether or not the Permittee may need to take action to meet the annual average process operating limits, and state what actions will be taken, if any, to ensure that the Permittee will comply with annual average conditions.

- VII.D.4.b** **Annual Process Report**—The Permittee shall submit a process report annually to the Regional Administrator. The Permittee shall report the annual hourly average waste feed rate, combustion chamber temperature, ESP inlet temperature, and stack gas velocity. The annual Process report is due by *[Insert either January 31 of each year or within 30 days of the anniversary of the effective date of this permit]* \_\_\_\_\_. Annual process reports shall be submitted throughout the effective term of this permit.

- VII.D.4.c** **Land Use Change Certification**—The Permittee shall submit a certification letter to the Regional Administrator within 30 days of completing the land use changes specified in Condition VII.D.3.b of this Permit. The certification letter shall certify that the land use changes have been implemented and provide such documentation as necessary to show that the land use has been changed.

## MODULE VIII—CORRECTIVE ACTION

*This module addresses corrective action for releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU) at the facility, regardless of when waste was placed in the unit or whether the unit is currently active. RCRA, 40 CFR Part 264.101, authorizes EPA to require corrective action by the facility owner or operator beyond the facility boundary, when necessary to protect human health and the environment, unless the owner or operator demonstrates that permission to undertake such action, despite the owner/operator's best efforts, was denied.*

*This module has been structured on the assumption that a RCRA facility assessment (RFA) has been completed for the facility. The results of the RFA should be used as a basis for developing compliance schedules for investigating and correcting releases from SWMUs. If an RFA has not yet been completed, then the Permit Writer and the Regional Administrator can determine whether the permit will be issued without the RFA being completed. If it will, the Permit Writer should establish a compliance schedule for completing the RFA and any subsequent corrective action measures.*

*This module relies heavily on facility information (such as an RFA report or a RCRA facility investigation [RFI] report) and work plans prepared either before, in conjunction with, or after the Part B Permit Application. This approach requires that the documentation (reports or plans) external to the Part B Permit Application and Permit be as comprehensive and detailed as necessary to ensure compliance with the corrective action regulatory requirements, protect human health and the environment, and be sufficient for justification of decisions during the public notice period. Notices or directives that the Regional Administrator issues to facilities that request the submittal of plans or information (such as a SWMU assessment or Current Conditions report) or other information should also have clear performance standards that should be met and the necessary data quality objectives the facility should meet. By doing this, the permit is no longer overburdened by information requirements or requests. Rather, the permit simply outlines the steps required to comply with the corrective action program and defines a clear endpoint. The substantive information needs required for making good risk management decisions are included in Agency guidance documents, policy directives, or Regional Administrator notices. To promote complete documentation, the Permit Writer should be knowledgeable about, and refer the applicant to, guidance documents and policy directives regarding corrective action. A good place to begin is the RCRA Corrective Action Plan (CAP) (OSWER Policy Directive No. 9902) being careful not to use the model scopes of work as boilerplate, but utilizing the inherent flexibility available to tailor a site-specific permit.*

### VIII.A AUTHORITY

Sections 3004(u) and 3004(v) of RCRA; 42 USC § 6924; Sections 3005 of RCRA; 42 USC §6925; and 40 CFR Part 264.101 require that all RCRA permits contain provisions for addressing corrective action for releases of hazardous waste or hazardous waste constituents from any SWMU, regardless of when waste was placed in the unit or whether the unit is closed. These sections further require a compliance schedule for

corrective action (if necessary) and evidence of financial assurance. This module outlines the elements for satisfying the corrective action program requirements.

#### **VIII.B IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS**

Attachment VIII-B lists a possible example of a listing of site SWMUs and areas of concern (AOC) identified during the RFA conducted at the facility. It also lists dates of an initial RFA and any subsequent RFAs which may be available. Information provided in the RFA or Part B Permit Application shall be in accordance with 40 CFR Part 270.14(d).

*Note: In addition to conditions required to be included in all permits (40 CFR Part 270.30 and 270.31), additional conditions may be required on a case-by-case basis as discussed in 40 CFR Parts 270.32 and 270.33. The following are examples of some of these. Conditions related to schedules, monitoring, and other conditions related to other EPA statutes or other Federal statutes may be necessary.*

#### **VIII.C NOTIFICATION REQUIREMENTS FOR, AND ASSESSMENT OF, NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS**

The Permittee shall notify the Regional Administrator, in writing, of any and all SWMUs identified after the issuance of this permit. Investigation of the new SWMUs shall follow the appropriate Data Quality Objectives (DQOs) established and should contribute to meeting the overall performance goals established at the site for corrective action. The schedule for the notification and assessment of a newly-identified SWMU could follow the example timetable established in Attachment VIII-C.

#### **VIII.D NOTIFICATION REQUIREMENTS FOR NEWLY IDENTIFIED RELEASES FROM SOLID WASTE MANAGEMENT UNITS**

The Permittee shall notify the Regional Administrator, in writing, of any release(s) of hazardous wastes and/or hazardous constituents identified during ground water monitoring, field investigation(s), environmental auditing, or other activities undertaken after issuance of this permit. Investigation of the newly-identified release shall follow appropriate procedures established at the site for characterization of releases, and be incorporated into ongoing site investigations already underway. After initial characterization, the Regional Administrator will determine the need for additional actions, including stabilization, removal, or better characterization. The schedule for the notification and investigation of a newly-identified release could follow the example timetable established in Attachment VIII-C.

#### **VIII.E STABILIZATION OR EMERGENCY REMOVAL**

Stabilization activities are typically required for control of ground water releases at large industrial facilities and the permittee should not delay action until total site characterization is complete if enough data is available to control obvious releases, particularly those that extend off-site. The Permittee shall notify the Regional

Administrator within 24 hours of becoming aware of a situation that requires stabilization. During the course implementation of the corrective action program at the facility, and at the discretion of the Regional Administrator, stabilization may be required to control or abate a release that poses a threat to human health or the environment. The Permittee shall notify the Regional Administrator if the stabilization activities used are not controlling or abating the threat or effectively minimizing or preventing the further spread of contamination. Stabilization activities may then be revised, or final corrective measures may be implemented. The timetable for stabilization implementation should follow that developed in Attachment VIII-C.

#### **VIII.F RCRA FACILITY INVESTIGATION WORK PLAN**

*The Permit Writer may decide to either list directly from, or add to, the guidance listing characterizations required for the various media, units, or waste.*

The Permittee shall submit an RFI work plan in response to the Regional Administrator's request, within the time frame allotted in Attachment VIII-C. The RFI work plan shall be consistent with the technical intent and objectives of the site performance standards. The RFI work plan shall include a quality assurance project plan (QAPP) that presents the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities designed to achieve the data quality goals of the site characterization, and may incorporate stabilization, Corrective Measures Study (CMS) type data collection and review, or any other actions which could be completed concurrently. A health and safety plan should also be prepared and maintained.

Upon review and approval of the RFI work plan by the Regional Administrator, the Permittee shall implement the work plan in accordance with the approved schedule.

#### **VIII.G RCRA FACILITY INVESTIGATION**

The Permittee shall submit an RFI report within the time frame contained in the approved compliance schedule. The RFI report shall present all information gathered under the approved RFI work plan.

After reviewing the RFI report, the Regional Administrator will determine the need for further investigation in the form of additional characterization or a CMS if one has not been completed concurrently. The schedule for the review and approval of the RFI report will follow the timetable established in Attachment VIII-C.

#### **VIII.H CORRECTIVE MEASURES STUDY WORK PLAN**

*The Permit Writer may decide to either list directly from, or add to, the guidance listing various requirements of the CMS work plan. If a presumptive remedy approach is being used, this may have been covered in the RFI work plan.*

If the Regional Administrator determines that there has been a release of hazardous waste and/or hazardous constituents that may present a threat to human health or the environment, the Regional Administrator may require a CMS work plan and will notify the Permittee in writing. The Permittee shall submit a CMS work plan in response to the Regional Administrator's request, within the time frame allotted in Attachment VIII-C. The CMS work plan shall be consistent with the most recent version of the EPA guidance document entitled RCRA Corrective Action Plan (EPA 520-R-94-004).

Upon review and approval of the CMS work plan by the Regional Administrator, the Permittee shall implement the work plan in accordance with the approved schedule.

#### **VIII.I CORRECTIVE MEASURES STUDY**

The Permittee shall submit a CMS report within the time frame contained in the approved CMS work plan. The CMS report shall present all information gathered under the approved CMS work plan. After reviewing the CMS report, the Regional Administrator will select a remedy.

#### **VIII.J SELECTION OF REMEDY**

The Regional Administrator will select a remedy that will (1) protect human health and the environment; (2) control the source(s) of release(s) in a manner that will reduce or eliminate, to the maximum extent practicable, further releases that may pose a threat to human health and the environment; and (3) meet all applicable federal, state, and local laws and regulations. After the Regional Administrator selects the remedy, a permit modification will be initiated pursuant to 40 CFR Parts 270.41 or 270.42 Class 3, as applicable, to require implementation of the selected remedy.

#### **VIII.K FINANCIAL ASSURANCE FOR CORRECTIVE ACTION**

The Permittee shall demonstrate continuous compliance with the RCRA financial assurance requirements for corrective action within the time frame allotted in Attachment VIII-C. If the remedy cost estimate increases, documentation of the financial assurance for that increase shall be provided within the time frame allotted. Regular financial assurance adjustments shall be submitted in accordance with the prescribed RCRA schedule.

#### **VIII.L REPORTING**

*The Permit Writer can add or delete from this list of information required depending on the number of permit conditions which were added when drafting the permit.*

The Permittee may submit, to the Regional Administrator, a signed quarterly (*or monthly, as determined by the Permit Writer*) progress report covering all activities, within the current reporting period, that are conducted under the corrective action program. The progress report should include the following information for the reporting period:



- **Description of the work completed**
- **Summaries of all findings, including summaries of laboratory data**
- **Summaries of all problems or potential problems encountered during the reporting period, and actions taken to correct problems**
- **Project work for the next reporting period**
- **Any instances of noncompliance with the corrective action program requirements**



## MODULE IX—CLOSURE AND FINANCIAL ASSURANCE

*This module should be included in all RCRA operating permits. It covers the closure, post-closure (if necessary), and financial assurance requirements stipulated by RCRA in 40 CFR Part 264 Subparts G and H. The model permit provides an outline that relies heavily on incorporating by reference (1) the closure plan and financial assurance documentation in the permit application, and (2) the regulations listed under RCRA in CFR. The Permit Writer may augment the outline by adding facility-specific and/or unit-specific conditions or requirements. However, the Permit Writer should consider the ease of revising the closure plan or financial assurance when the requirements are actually spelled out in the permit, in comparison with revising them when the requirements are simply incorporated by reference (the latter would require only revisions to the closure plan and/or financial assurance documentation in the permit application; however, the former would require changes to the documentation in the permit application and the permit). If the Permit Writer wishes to incorporate portions of the Part B Permit Application by reference, the Permit Writer should confirm that the Part B Permit Application contains specific and detailed information that is sufficient for determining compliance. This may include design information, decontamination procedures, and schedules for closure activities and financial assurance updates. If the Part B Permit Application requires modification to be more specific and enforceable, the Permit Writer should request that the facility modify it to meet these needs.*

### IX.A GENERAL CLOSURE REQUIREMENTS

The Permittee shall close the facility as required by (1) 40 CFR Parts 264.111 and 264.112 (a) and (b), Subpart G, (2) unit-specific closure requirements (*the Permit Writer may insert unit-specific closure requirements; for example 40 CFR Part 264.197[a] for tank systems*), and (3) the Closure Plan, Section I of the Part B Permit Application. Any amendments to the plan, required notifications, time allowed for closure, disposal or decontamination of equipment, structures, soils, certifications of closure, survey plats, or other regulatory requirements shall also be in accordance with applicable sections of 40 CFR Part 264 Subpart G unit-specific closure requirements, and the Closure Plan, Section I of the Part B Permit Application.

*The following statement is also required for specific tank systems under 40 CFR Part 264.197(c), surface impoundments under 40 CFR Part 264.228(c), and waste piles under 40 CFR Part 264.258(c), where the need for a contingent closure plan is outlined: “If the unit requires a contingent closure plan, the Permittee shall close the facility as required by applicable sections of 40 CFR Part 264 Subpart G, the unit-specific contingent closure requirements, and the Contingent Closure Plan, Section I of the Part B Permit Application.”*

### IX.B GENERAL POST-CLOSURE REQUIREMENTS

*This Condition may not be required for all facilities. It is always required for regulated units (land disposal units, such as landfills, land treatment units, surface impoundments,*

*and waste piles) and is sometimes required for tank systems without secondary containment or other units that cannot be clean-closed in place.*

The Permittee shall begin post-closure care for each unit after closure has been completed for each unit. Post-closure care shall be in accordance with (1) 40 CFR Part 264.117, (2) unit-specific post-closure care requirements (*the Permit Writer may insert unit-specific closure requirements; for example 40 CFR Part 264.197[b] for tank systems*), and (3) the Post-Closure Plan, Section I of the Part B Permit Application. Any amendments to the plan, required notifications, time allowed for post-closure, certifications of post-closure, or other regulatory requirements shall also be in accordance with applicable sections of 40 CFR Part 264 Subpart G unit-specific post-closure requirements, and the Post-Closure Plan, Section I of the Part B Permit Application.

*The following Condition is also required only for specific tank systems under 40 CFR Part 264.197(c), surface impoundments under 40 CFR Part 264.228(c), and waste piles under 40 CFR Part 264.258(c), where the need for a Contingent Post-Closure Plan is outlined: "If the unit requires a contingent post-closure plan, the Permittee shall implement post-closure care as required by applicable sections of 40 CFR Part 264 Subpart G, the unit-specific contingent post-closure requirements, and the Contingent Post-Closure Plan, Section I of the Part B Permit Application."*

#### **IX.C COST ESTIMATE FOR FACILITY CLOSURE (AND POST-CLOSURE)**

The Permittee shall prepare and maintain a cost estimate for closure ( and post-closure) activities in accordance with (1) 40 CFR Subpart H, (2) unit-specific closure cost estimate requirements (*the Permit Writer may insert unit-specific closure cost estimate requirements; for example 40 CFR Part 264.197[c][3] and [5] for tank systems*), and (3) the cost estimate in the Closure Plan, Section I of the Part B Permit Application. Any adjustments or revisions to the cost estimate shall be in accordance with the schedule requirements outlined in 40 CFR Part 264 Subpart H. The Permittee shall keep, at the facility, the most recent closure (and post-closure) cost estimate, as required by 40 CFR Parts 264.142(d) and 264.144(d).

#### **IX.D FINANCIAL ASSURANCE FOR FACILITY CLOSURE (AND POST-CLOSURE)**

The Permittee shall demonstrate continuous compliance with 40 CFR [*insert, as appropriate, Part 264.143 (financial assurance for closure), 264.145 (financial assurance for post-closure), or 264.146 (use of a mechanism for financial assurance for both closure and post-closure care)*] by providing documentation of financial assurance, as required by 40 CFR Part 264.151 (*wording of the instruments*) or 264.149 (*use of state-required mechanisms*), in at least the amount of the closure (and post-closure) cost estimate. Changes in financial assurance mechanisms must be approved by the Regional Administrator, pursuant to 40 CFR Part 264.143, 264.145, or 264.149.

#### **IX.E LIABILITY REQUIREMENTS**

The Permittee shall demonstrate continuous compliance with the requirement of 40 CFR Part 264.147(a) to have and maintain the liability coverage for sudden and accidental occurrences in the amount stipulated by the regulation.

*For facilities containing surface impoundments, landfills, land treatment units, or disposal miscellaneous units, the following condition should be added: “The Permittee shall also demonstrate continuous compliance with the requirement of 40 CFR Part 264.147(b) to have and maintain liability coverage for non-sudden accidental occurrences in the amount stipulated by the regulation.”*

*The Regional Administrator may grant variances (see 40 CFR Part 264.247[c]) from the levels of financial responsibility. If such a variance is granted, the adjusted amount of liability coverage should be documented in the permit.*

**IX.F INCAPACITY OF OWNER OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS**

*This Condition provides a process for notification and resolution if a bankruptcy affects any of the aforementioned parties associated with the financial assurance.*

Whenever necessary, the Permittee shall comply with 40 CFR Part 264.148.

**ATTACHMENTS**

## ATTACHMENT VI-A

INSTRUMENTATION CONSTRUCTION SPECIFICATIONS AND INSTALLATION CHECK-OUT PROCEDURES<sup>a</sup>

Control Parameter	Instrument Description	Instrument Tag Number	Location	Range	Accuracy	Installation Check-Out Procedures
Hazardous waste feed rate	Mass flow meter	<i>[Insert tag number]</i>	In feed line, upstream from the waste burner	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Combustion temperature	Thermocouple	<i>[Insert tag number]</i>	Cement kiln combustion chamber	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Combustion pressure	Diaphragm-type transducer	<i>[Insert tag number]</i>	Cement kiln combustion chamber	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Stack gas flow rate	Annubar	<i>[Insert tag number]</i>	Exhaust stack	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Stack gas oxygen	Zirconium oxide cell	<i>[Insert tag number]</i>	Exhaust stack	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Stack gas carbon monoxide	Infrared cell	<i>[Insert tag number]</i>	Exhaust stack	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Atomizing fluid pressure	Differential, diaphragm-type transducer	<i>[Insert tag number]</i>	In waste feed and atomizing steam lines	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>

## ATTACHMENT VI-A

INSTRUMENTATION CONSTRUCTION SPECIFICATIONS AND INSTALLATION CHECK-OUT PROCEDURES<sup>a</sup>

Control Parameter	Instrument Description	Instrument Tag Number	Location	Range	Accuracy	Installation Check-Out Procedures
Kiln rotation speed	Timer	<i>[Insert tag number]</i>	Kiln	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Clinker production rate		<i>[Insert tag number]</i>	In clinker cooler	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
ESP plate voltage	Ampmeter	<i>[Insert tag number]</i>	ESP plates	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
ESP inlet temperature	Thermocouple	<i>[Insert tag number]</i>	ESP inlet plenum	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
ESP differential pressure	Differential, diaphragm-type transducer	<i>[Insert tag number]</i>	ESP inlet and discharge plenums	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
ESP rapper frequency	Rapper controller	<i>[Insert tag number]</i>	ESP control system	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>
Others	<i>[List types of instruments]</i>	<i>[Insert tag number]</i>	<i>[List locations]</i>	<i>[Insert range of instrument]</i>	<i>[Insert accuracy of instrument]</i>	<i>[Insert description of the installation check-out and acceptance procedures]</i>

Note: <sup>a</sup> The Permit Writer will need to decide whether to list monitoring instruments by brand name and model, or to simply list a set of specifications for each monitoring instrument. If the instruments are listed by brand name and model,

then the facility must submit a permit modification request to replace any instrument with a different brand or model. The preferred method is to identify the instrument by performance specifications rather than by brand or model. For each monitoring instrument, the table should list, at a minimum, the parameter being measured, the type of instrument, the range of operation, the accuracy, and the calibration frequency.



**TABLE VI-B**  
**INSPECTIONS**

<b>Equipment/Instrument</b>	<b>Inspection Elements</b>	<b>Inspection Frequency</b>
<b>Burner system</b>	<b>Leaks in manifold</b>	<i>[Specify frequency]</i>
	<b>Turndown ratio</b>	<i>[Specify frequency]</i>
<b>Waste feed system</b>	<b>Atomizing fluid pressure transducer</b>	<i>[Specify frequency]</i>
	<b>Waste feed pressure transducer</b>	<i>[Specify frequency]</i>
	<b>Waste feed flowmeter</b>	<i>[Specify frequency]</i>
<b>Waste tank system</b>	<b>Tank integrity</b>	<i>[Specify frequency]</i>
	<b>Level controls</b>	<i>[Specify frequency]</i>
	<b>Overflow alarms and controls</b>	<i>[Specify frequency]</i>
	<b>Secondary containment</b>	<i>[Specify frequency]</i>
<b>Cement kiln</b>	<b>Fugitive emissions</b>	<b>Daily</b>
	<b>Refractory</b>	<i>[Specify frequency]</i>
<b>Electrostatic precipitator</b>	<b>Operation of cleaning mechanism (rapper)</b>	<i>[Specify frequency]</i>
	<b>Power supply</b>	<i>[Specify frequency]</i>
<b>Continuous process monitors</b>	<b>Out-of-tolerance operational data</b>	<b>Daily</b>
<b>Automatic waste feed cut-offs</b>	<b>Operability</b>	<b>Weekly</b>

Note: <sup>a</sup> Inspections should be conducted in accordance with the manufacturer's specifications and the approved inspection schedule, included as part of the Part B permit application. At a minimum, each instrument or monitoring device should be inspected and calibrated on an annual basis.

## ATTACHMENT VI-C

PREVENTIVE MAINTENANCE AND CALIBRATION<sup>a</sup>

Item Description	Tag Number	Preventive Maintenance and Calibration Procedures <sup>b</sup>	Preventive Maintenance / Calibration Frequency <sup>a</sup>
Waste burner	BU-[***]	<i>[Describe preventive maintenance procedures for the burner]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Hazardous waste feed rate flow meter	FDAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Combustion temperature thermocouple	TAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Combustion pressure transducer	PAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument.]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Stack gas flow rate meter	FFIT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Stack gas oxygen continuous emission monitor	AIT-[***]	<i>[describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Stack gas carbon monoxide continuous emission monitor	AIT-[***]	<i>[describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Atomizing fluid pressure transducer	PDAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>

## ATTACHMENT VI-C

PREVENTIVE MAINTENANCE AND CALIBRATION <sup>a</sup>

Item Description	Tag Number	Preventive Maintenance and Calibration Procedures <sup>b</sup>	Preventive Maintenance / Calibration Frequency <sup>a</sup>
Kiln drive motor(s)	MAT-[***]	<i>[Describe preventive maintenance procedures for the equipment]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Clinker production rate meter		<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
ESP inlet temperature thermocouple	TAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
ESP differential pressure transducer	PDAT-[***]	<i>[Describe preventive maintenance and calibration procedures for the instrument]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
ESP cleaning mechanism (rapper)	<i>[List tag number]</i>	<i>[Describe preventive maintenance procedures for the equipment]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Induction fan	B-[***]	<i>[Describe preventive maintenance procedures for the equipment]</i>	<i>[Describe preventive maintenance/ calibration frequency]</i>
Others	<i>[List tag numbers]</i>	<i>[Describe preventive maintenance procedures]</i>	<i>[Provide preventive maintenance frequencies]</i>

Note: <sup>a</sup> The Permit Writer will need to decide whether to list monitoring instruments by brand name and model, or to simply list a set of specifications for each monitoring instrument. If the instruments are listed by brand name and model, then the facility must submit a permit modification request to replace any instrument with a different brand or model. The preferred method is to identify the instrument by performance specifications rather than by brand or model. For each monitoring instrument, the table should list, at a minimum, the parameter being measured, the type of instrument, the range of operation, the accuracy, and the calibration frequency.

- <sup>b</sup> **Preventive maintenance should be conducted in accordance with the manufacturer's specifications, included as part of the Part B permit application. At a minimum, each instrument or monitoring device should be inspected and calibrated on an annual basis.**

## ATTACHMENT VI-D

## PROCESS CONTINUOUS MONITORS AND WASTE FEED CUT-OFF PARAMETERS

Control Parameter	Instrument Description <sup>a</sup>	Instrument Tag Number	Expected Range of Operations	Automatic Waste Feed Cut-Off Set Points
Maximum hazardous waste feed rate	Mass flow meter	<i>[Insert tag number]</i>	[ ] - [ ] lb/hr	[ ] lb/hr, hourly rolling average
Minimum and maximum combustion zone temperature	Thermocouple	<i>[Insert tag number]</i>	[ ] - [ ] °F	High temperature: [ ] °F, hourly rolling average  Low temperature: [ ] °F, hourly rolling average
Maximum combustion zone pressure	Diaphragm-type transducer	<i>[Insert tag number]</i>	[ ] - [ ] inches water column vacuum	[ ] inches water column, instantaneous
Maximum stack gas flow rate	Annubar	<i>[Insert tag number]</i>	[ ] - [ ] acfm	[ ] acfm, hourly rolling average
Minimum stack gas oxygen	Zirconium oxide cell	<i>[Insert tag number]</i>	[ ] - [ ] volume percent, dry basis	[ ] volume percent, dry basis, hourly rolling average
Maximum stack gas carbon monoxide	Infrared cell	<i>[Insert tag number]</i>	[ ] - [ ] ppmv, corrected to 7% oxygen	100 ppmv, hourly rolling average
Atomizing fluid pressure	Differential, diaphragm-type transducer	<i>[Insert tag number]</i>	[ ] - [ ] psig	[ ] psig, instantaneous
Kiln rotation speed	Timer	<i>[Insert tag number]</i>	[ ] - [ ] rpm	[ ] rpm instantaneous

## ATTACHMENT VI-D

## PROCESS CONTINUOUS MONITORS AND WASTE FEED CUT-OFF PARAMETERS

Control Parameter	Instrument Description <sup>a</sup>	Instrument Tag Number	Expected Range of Operations	Automatic Waste Feed Cut-Off Set Points
Clinker production rate		<i>[Insert tag number]</i>	[ ] - [ ] ton/hr	[ ] ton/hr, hourly rolling average
Minimum ESP plate voltage	Ampmeter	<i>[Insert tag number]</i>	[ ] - [ ] kVA	[ ] kVA, hourly rolling average
ESP inlet temperature	Thermocouple	<i>[Insert tag number]</i>	[ ] - [ ] °F	[ ] °F, hourly rolling average
ESP differential pressure	Differential, diaphragm-type transducer	<i>[Insert tag number]</i>	[ ] - [ ] inches water column	[ ] inches water column
Others	<i>[List types of instruments]</i>	<i>[Insert tag number]</i>	[ ]	[ ]

Note: <sup>a</sup> The Permit Writer will need to decide whether to list monitoring instruments by brand name and model, or to simply list a set of specifications for each monitoring instrument. If the instruments are listed by brand name and model, then the facility must submit a permit modification request to replace any instrument with a different brand or model. The preferred method is to identify the instrument by performance specifications rather than by brand or model. For each monitoring instrument, the table should list, at a minimum, the parameter being measured, the type of instrument, the range of operation, the accuracy, and the calibration frequency.

## ATTACHMENT VIII-B

LIST OF SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN  
IDENTIFIED IN THE RCRA FACILITY ASSESSMENT(S)

*Below is an example of a SWMU and AOC list. Continue the same numbering scheme throughout the SWMU identification process; for example, never number SWMUs only as a number. Also, identifying the AOCs as letters rather than numbers makes referencing SWMUs and AOCs easier and clearer. Identifying the submittal dates of the various RFA reports facilitates finding information for each SWMU or AOC listed.*

**RFA Dated:** Month/Day/Year

<u>SWMU Number</u>	<u>Identification</u>
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1	Cement kiln 208
2	Laboratory
3	Tank Farm

<u>Areas of Concern</u>	<u>Identification</u>
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A	Used Refractory Storage Area
B	Lubricant Storage Area

**RFA Dated:** Month/Day/Year

<u>SWMU Number</u>	<u>Identification</u>
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4	Cement kilns No. 1 and No. 2
5	Railcar Unloading Area
etc...	

<u>Areas of Concern</u>	<u>Identification</u>
-------------------------	-----------------------

C	General Storage Area
etc...	

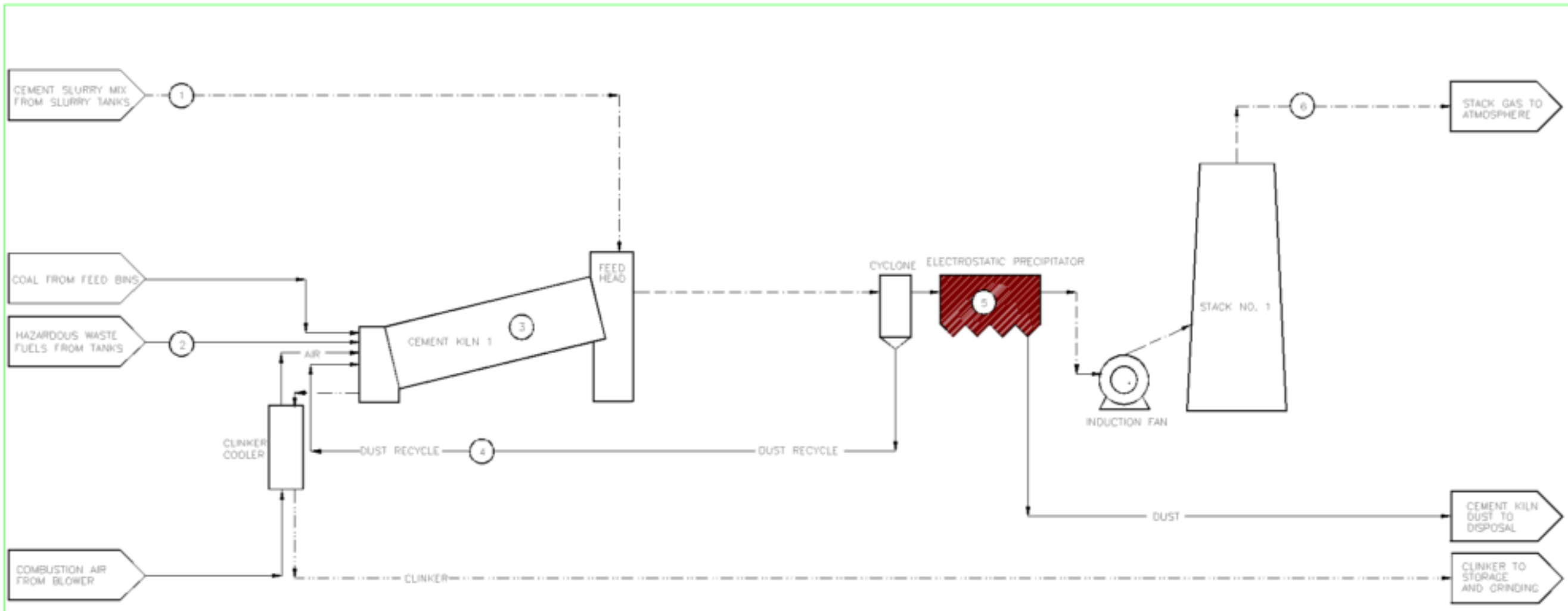


## ATTACHMENT VIII-C

## FACILITY REPORTING AND SUBMITTAL SUMMARY

*Following is an example of the various reports and submittals that may be appropriate during the administration of the corrective action program at a facility. The Permit Writer should amend the summary as needed, either by adding or deleting reports, combining reports, and/or shortening or lengthening response times in order to meet timely risk management decisions. In cases where interim actions will be final remedies, or presumptive remedy strategies will be utilized, time frames for some activities such as the investigation and CMS should be concurrent and tied to permit issuance date. An effort should be made to focus on actions which need to occur, and not solely on completing sequential process steps which may not bring the permittee closer to site performance goals.*

<u>Facility Submittal Requirements</u>	<u>Due Date</u>
Notification of newly-identified SWMUs	Fifteen calendar days after discovery
Notification of newly-discovered releases	Fifteen calendar days after discovery
Progress reports on all activities	Quarterly, monthly, or—as determined—no later than 90 calendar days after Permittee is required to begin implementation
SWMU Assessment Plan for newly-identified SWMUs	Ninety calendar days after receipt of request
Current Conditions Report /Update of report	Sixty calendar days after completion of the implementation of the SWMU Assessment Plan
RFI Work Plan for SWMU(s) identified at time of permit issuance	Forty-five calendar days after the effective date of the permit
RFI Report and Summary Report	Eighteen months after permit issuance
Interim Measures Plan for interim measures identified at time of permit issuance	Thirty calendar days after the effective date of the permit
Interim Measures Plan for interim measures required after permit issuance	Thirty calendar days after notification
CMS Plan	Forty-five calendar days after notification of requirement to perform CMS
CMS Report	One hundred eighty days after notification or requirement to perform CMS
Demonstration of financial assurance	One hundred twenty days after permit modification for remedy



PERMIT LIMITS

SLURRY FEED - 1	HAZARDOUS WASTE FEED - 2	CEMENT KILN - 3	DUST RECYCLE - 4	ESP - 5	STACK - 6
MAX. 200 tph HRA	MAX. 250 lb/min HRA	MAX. RPM 0.75	MAX. 5 tph HRA	MAX. INLET TEMPERATURE 395° F	MAX. FLOW 450,000 acfm HRA
	MIN. HEAT VALUE 5,000 BTU/lb	MAX. PRESSURE -0.5 in. w.c.		MIN. POWER INPUT 13.6 kVA HRA	
	MAX. ASH 1% BY WT.	MIN. TEMPERATURE 2200° F HRA			
	MAX. CHLORINE 2 lb/min	MAX. TEMPERATURE 2600° F HRA			
	MAX. VISCOSITY 0.5 cp				
	SEE METALS TABLES				

METALS FEED RATE LIMITS

ANTIMONY	2 lb/hr HRA
ARSENIC	0.02 lb/hr HRA
BARIUM	400 lb/hr HRA
BERYLLIUM	0.001 lb/hr HRA
CADMIUM	0.01 lb/hr HRA
CHROMIUM	1 lb/hr HRA
LEAD	0.7 lb/hr HRA
MERCURY	0.1 lb/hr HRA
NICKEL	10 lb/hr HRA
SELENIUM	0.01 lb/hr HRA
SILVER	5.5 lb/hr HRA
THALLIUM	0.7 lb/hr HRA

EXAMPLE  
CEMENT KILN PROCESS  
SCHEMATIC WITH PERMIT AND  
OPERATING CONDITIONS